**THE OSPREY**

A Newsletter Published by the Steelhead Committee
Federation of Fly Fishers

Dedicated to the Preservation of Wild Steelhead • Issue No. 24, June 1995

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**SNAKE RIVER SALMON AND STEELHEAD**

Bill Redman, a retired IBM executive, is a past-president of the Washington Fly Fishing Club and a longtime steelhead activist. Bill has graciously offered his considerable talents to the Steelhead Committee’s legislative program, where his influential manner already has been effective. This is his first contribution to The Osprey and we think readers will agree that it is a significant one.

This article is about the declining Snake River runs of salmon and steelhead, especially the perilously small remaining runs of wild fish. While most salmon and steelhead runs throughout the Columbia River system are depressed, every run into the Snake, by far the largest tributary of the Columbia, is either already extinct, listed as endangered under the Endangered Species Act, or being considered for listing this year. These are the runs of fish that must make the round trip through the eight Corps of Engineers dams and 300 continuous miles of reservoirs between Lewiston/Clarkston on the Idaho/Washington border at the upstream end and Bonneville at the downstream end.

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**Background on the Fishing**

My interest in the health of the salmon and steelhead runs of the Snake River system is personal and deep. I first fished the Grande Ronde River, a major tributary of the Snake in extreme southeastern Washington and northeastern Oregon, in 1964.

In the 1960’s the Grande Ronde consistently offered what I still think was the finest sport fishing experience available in Washington. In the golden early fall, several thousand wild summer run steelhead moved into the deep winding canyon cut through the Palouse plateau. They had negotiated about 400 river miles and, at that time, four dams to get from the Pacific to their home river. Not large as adult steelhead go, most of them had spent one year at sea and weighed four to seven pounds, still mighty big trout by most standards. More than most steelhead, these fish were attuned to the surface. Only a floating line was necessary, and both wet and dry flies brought adrenaline rushing strikes and wild fights from hooked fish.

After a 20 year absence during which I lived in the East, I returned to the Northwest and have fished the Ronde every fall since 1991. So my before/after picture is quite vivid. Although the ritual is the same as it was in the 1960’s, the steelhead runs are a shadow of their former abundance. Not only are there fewer fish, but most of them are now adipose clipped hatchery fish. And the consistency of the runs from year to year is gone; a fairly good number of fish in 1991 and 1992, followed by very poor returns in 1993 and 1994. It is the sport of the 1960’s that we are trying to bring back.

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**The Politics**

With that background, I spent the last week of March 1995 in Washington D.C., calling on the office of every member of the Washington congressional delegation and one member each of the Oregon and Idaho delegations. One of the frustrations of the trip was that, in most cases, I met with legislative staff people rather than members of Congress themselves. I did meet
The Osprey, No. 24, June 1995, page 2
with two House members including my own representative. I was there to represent the Steelhead Committee of the Federation of Fly Fishers, and Save Our Wild Salmon, an umbrella coalition of 44 fish and conservation advocacy organizations, including the Federation. But I tried very hard to make it clear that, in a much broader sense, my views are shared by an overwhelming majority of the one million plus salmon and steelhead anglers in the three state area.

On every call, I reviewed as much of the information from this article as I could fit into a 10 to 30 minute discussion, the typical time allotment for the continuous stream of visitors to Capitol Hill. I left a package with cover letter and charts in each office. Other than from the known supporters of our position, feedback from the people we talked with was scattered and generally noncommittal, so it was impossible to tell if we made any progress or not. Typically, we were greeted politely, apparently heard intently, and answered in pro fish generalities, with a concern or two voiced about potential impacts on agriculture or harging. I hope we at least got across the following points:

1. There are a lot of salmon and steelhead anglers in the Northwest who care passionately about their sport and are angry about what is happening to it.
2. All the Snake River sea run salmonids are headed for extinction if we continue business as usual.
3. There are known causes and known fixes to the problem.
4. We spend a lot of money and create a lot of jobs with our fishing.
5. We want these magnificent runs of fish to recover.
6. We are on this issue for the long haul.

I hope there is some positive cumulative effect from the series of visits to Capital Hill being made by fish advocates, but we can’t be sure. The subsidized special interest river users, including the aluminum companies, utilities, and bargers were lobbying at the same time we were there. More on them later.

Goal

Our goal is not, as some politicians seem to envision, a salmon museum populated by remnant runs of hatchery fish designed to show future generations a taste of what it used to be like. Our goal is species recovery in all the remaining moving water in the Snake River basin, accessible to the sea, to the status in which wild runs of salmon and steelhead are abundant. That means enough fish for procreation well above today’s marginal and submarginal levels, with enough left over for significant harvest. We must settle for no less.

Status of the Runs

All Snake River runs of wild sea run salmonids are in extreme peril. The last of the coho disappeared in 1985; extinct!

Ten years later the only sockeye run, to Redfish Lake in Idaho, is on life support. Returns are in single digits, with no fish in one recent year. The sockeye are listed as “Endangered” under the Endangered Species Act, and there is a serious question as to whether they can be saved at this late hour, even with heroic efforts. Keep in mind that this is the sockeye run that the National Marine Fisheries Service in 1993 said was “no jeopardy” of extinction as a result of operation of the Columbia/Snake River hydro system.

The fall chinook are hanging on at a few hundred wild fish per year, and dropped as low as 78 in 1990.

The spring/summer chinook appeared to be doing somewhat better than the fall run until 1994. From 1979 to 1993, the returns ranged from about 5,000 to almost 12,000 per year. But the 1,822 wild fish in 1994 were only 37 percent of the worst previous year and 20 percent of the previous ten year average. A complete disaster! Both the spring/summer and the fall chinook are listed as “Endangered.”

And finally, our much loved steelhead, the hardiest of the sea run salmonoids and the quintessential Pacific Northwest game fish: A look at the last 16 years would suggest

that they seemed to be holding their own through 1989. But then there was a serious drop in 1990, two years of recovery in 1991 and 1992, and then two consecutive bad years, to 38 percent of the previous ten year average in 1993 and 32 percent in 1994. These numbers confirm my personal experience on the Grande Ronde in the last four years. The steelhead are being considered for listing under the Endangered Species Act this year.

There is an obvious domino effect occurring, which raises the following question. With the coho declared extinct ten years ago, the sockeye possibly functionally extinct as this is written, and both major strains of chinook apparently headed in the same direction before many more years pass, can our steelhead be very far behind?

These figures were taken from the following table, which contains the best 1979 to 1994 estimates of wild adult spring/summer chinook, fall chinook, and steelhead escapement at Lower Granite Dam, the upstream most dam and last counting station before the adult fish reach moving water and proceed on to the spawning beds.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SPRING/ SUMMER CHINOOK</th>
<th>FALL CHINOOK</th>
<th>STEELHEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>7,540</td>
<td>20,100</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>4,888</td>
<td>20,100</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>8,697</td>
<td>23,000</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>9,977</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>9,408</td>
<td>24,100</td>
<td></td>
</tr>
<tr>
<td>1984</td>
<td>7,450</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td>9,244</td>
<td>26,700</td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>11,659</td>
<td>449</td>
<td>26,800</td>
</tr>
<tr>
<td>1987</td>
<td>11,342</td>
<td>252</td>
<td>26,500</td>
</tr>
<tr>
<td>1988</td>
<td>13,178</td>
<td>368</td>
<td>18,700</td>
</tr>
<tr>
<td>1989</td>
<td>6,250</td>
<td>295</td>
<td>21,500</td>
</tr>
<tr>
<td>1990</td>
<td>7,530</td>
<td>78</td>
<td>7,900</td>
</tr>
<tr>
<td>1991</td>
<td>5,520</td>
<td>318</td>
<td>11,500</td>
</tr>
<tr>
<td>1992</td>
<td>9,344</td>
<td>533</td>
<td>16,200</td>
</tr>
<tr>
<td>1993</td>
<td>10,183</td>
<td>742</td>
<td>7,700</td>
</tr>
<tr>
<td>1994</td>
<td>1,822</td>
<td>441</td>
<td>6,500</td>
</tr>
</tbody>
</table>
To put all this in historic perspective, the salmon and steelhead runs of the entire Columbia system in the 1800's, when only Native Americans were harvesting them, have been estimated in the range of 10 to 25 million adult fish per year, averaging about 16 million. Of those that returned to the Upper Columbia and Snake east of the Cascade Mountains, about 45 percent of the chinook and 55 percent of the steelhead are thought to have been Snake River fish.

By the 1930's, the Columbia adult wild runs were down to about five or six million fish; by the 1960's to two or three million. By 1994 the total number of adult wild fish crossing the Columbia Bar from the Pacific Ocean to the River was somewhere in the neighborhood of 200,000, one or two percent of what were once the largest runs of sea run salmonids in the world.

Causes of Impending and Past Extinctions

The causes of salmonid decline over the years have commonly been grouped into "the four H's:" harvest, hatcheries, habitat, and hydro.

Harvest in the late 1800's and first half of this century was carried out with little or no consideration of spawning escapement, and the pressure on the runs was enormous. Officials of the Corps of Engineers still like to blame harvest for the declines, but the facts argue differently.

Hatcheries were promoted and built with a sense of euphoria and, until recently, no awareness of the problems they create. These problems have been reported in detail in previous issues of The Osprey.

Spawning and rearing habitat has been decimated by excessive logging, grazing, and mining too close to the streams and their adjacent riparian zones.

And huge dams, including Grand Coulee on the Columbia, Hells Canyon on the Snake, and Dworshak on the North Fork of the Clearwater, were built with no provision for fish passage upstream or down, thereby blocking forever hundreds of miles of moving water habitat.

But until 1970, none of these factors brought the Snake River runs remotely near extinction. Harvest has come increasingly under control, and today there is very little fresh water harvest and greatly reduced ocean harvest. For example, killing wild steelhead has been prohibited for a number of years. There is increasing awareness of the dangers of hatcheries and the need to save and recover the wild runs. And there is still good habitat, especially in the wilderness areas of Idaho.

Downstream Passage Through the Dams

But in the period from 1970 to 1975, the numbers game of attrition played by the Corps of Engineers and its dams was escalated dramatically. The number of dams between Lewiston and Bonneville doubled from four to eight, as Little Goose and Lower Monumental were completed on the Snake in 1970, followed by John Day on the Columbia in 1971, and Lower Granite on the Snake in 1975. This was the final and most destructive series of steps in the push of the Snake River runs toward extinction.

I remember well the late Lew Bell, a past president of the Federation of Fly Fishers and Washington state fish champion of the 1960's, sitting by the camp fire on the bank of the Grande Ronde in about 1969, calling it the greatest river in the country, and predicting exactly what has happened, the fall of the steelhead runs because of the additional dams. The danger signs have been clear since at least 1970.

All eight of the dams between Lewiston and Bonneville, four on the Snake and four on the Columbia, were built by the Corps of Engineers with no provision for downstream migration of juvenile fish. The fish were left to be ground up in the turbines, and the half hearted attempts to improve downstream passage since construction have been largely ineffective, and in one significant case, counter productive. The eight dams strung together have also turned the moving river into 300 continuous miles of reservoirs.

The Osprey, No. 24, June 1995, page 3

The effect is a three to five times increase in downstream migration times, with accompanying disruption of the smoltification process, and increased exposure to predators and high water temperatures.

A study done by the Idaho Department of Fish and Game showed that over 90 percent of the man caused attrition—including downstream migration through the hydro system, harvest, and upstream migration through the hydro system—occurs during downstream migration. This is the primary cause of the impending and past extinctions, and the first order of business if the fish are to be brought back to abundance.

Barging Smolts

The second major cause is the Corps of Engineers' bizarre approach to addressing the problems with downstream migration. For about 20 years, the Corps has captured downstream migrants at the dams as far upstream in the hydro system as possible, most commonly at Lower Granite Dam, barged or trucked them to below Bonneville, and returned them to the Columbia. The Corps claims great success based on their figures that over 95 percent of the captured smolts are returned to the river alive. This logic ignores the fact that the payoff is...
The Osprey, No. 24, June 1995, page 4

returning adults, not live smolts below Bonneville. The preceding chart shows a nearly perfect inverse relationship between smolts barged and returning adults: the more smolts barged, the fewer returning adults! There are questions not raised by the Corps which might help to account for the inverse relationship. What happens to the homing instinct, the imprint, during barging? What happens to the smoltification process, the preparation for life in salt water? And what is the general health of the barged smolts when they are returned to the river?

El Nino

For those who would prefer to do nothing beyond business as usual to save these fish, the favorite excuse for the declines is "El Nino," the intermittent changes in ocean currents which push warm water farther north in the Pacific than normal, thereby disrupting the ocean migrations and feeding of the salmon and steelhead. El Nino occurrences seem to have been more frequent in the last few years than they were not too many years ago, and this is the only cause of the declining runs outside the control of man. However, a reasonable assumption is that El Nino occurred periodically through the thousands of generations of salmonids, and until man began managing the fish to the margins, they prospered regardless of ocean currents. To blame El Nino is intellectual thumb sucking of the worst kind; the surest path to failure. It places all the blame conveniently in an area beyond our control, thereby obviating the need to do something positive in those areas we can control.

Fixes

So what needs to be done? First, for about two months every spring from mid April to mid June, during the downstream migration of the smolts, the river must be returned as closely as possible to its natural condition. Downstream passage of smolts must be speeded by several times, water must be spilled over or through the dams to allow the fish to bypass the turbines, and the fish must stay in the river both ways, not just upstream.

Short of putting a river-sized hole in the bottom of each dam, which is probably not politically feasible, the Snake River dams need to be modified to allow draw downs and spilled water during the migration season, and draw downs and spills need to become part of the normal operating regimen of these dams. Draw downs speed the river flow in much the same way that a garden hose releases a faster flow of water when the nozzle is constricted.

The price tag for modifying the dams is not trivial, and power generation and barging will be disrupted during the downstream migration season. A major cultural shift is required, so that fish passage is recognized as an ongoing cost of doing business for the Corps and the Bonneville Power Administration. When these dams were built, part of the understanding, or if you will, the contract, with the people of the Northwest was that the fish would be saved. The bureaucrats' fancy word for this is mitigation. I am absolutely certain that the people of the Northwest, and probably the nation, would never have bought into the construction of these dams if they had known the price would include extinction of the Snake River runs.

Second, barging needs to be reduced to no more than half of the smolts immediately, with intent to phase it out completely. It is a failed experiment, on which the Corps has refused to back off.

Nearly everyone agrees that the best science must be used in addressing this disastrous situation, but at the same time some of the politicians want guarantees that the chosen recovery plan will work. The two requests are mutually incompatible, because good science is by definition experimental, managed for uncertainty, learns from failure, is subject to mid-course correction, and recognizes the complexity of multi-faceted problems. This is not the stuff of guarantees. What can be guaranteed is that the current mode of operation will bring further extinctions.

On the positive side, a significant majority of the state, university, private, and tribal scientists who have studied this issue believe the approach using draw downs, spill, and phasing out of barging will allow the runs to recover, assuming that we can hold our own on habitat preservation and harvest and hatchery limitations.

Government Agency Recovery Plans and Suits

Both the Northwest Power Planning Council (in December 1994) and the National Marine Fisheries Service (March 1995) have recently revised their plans for salmon and steelhead recovery after losing law suits brought as a result of their previous inadequate efforts.

Before discussing the differences between the two plans, it is necessary to provide a brief synopsis of the two lawsuits on the Snake River runs and recovery plans.

First, the suit by the Idaho Department of Fish and Game (plus Oregon, Alaska, anglers, tribes, etc.) against the National Marine Fisheries Service was based on the failure of the previous version of the NMFS Plan to meet the requirements of the Endangered Species Act. In March 1994, Federal District Judge Marsh ruled for the plaintiffs, writing in part: the process is seriously, 'significantly' flawed because it is too heavily geared towards a status quo that has allowed all forms of river activity to proceed in a deficit situation—that is, relatively small steps, minor improvements and adjustments—when the situation literally cries out for a major overhaul. Instead of looking for what can be done to protect the species from jeopardy, NMFS and the action agencies have narrowly focused their attention on what the establishment is capable of handling with minimal disruption.' He also called the NMFS action of no jeopardy "arbitrary and capricious," and also said NMFS had not considered "reasonable and prudent alternatives to avoid" the extinction.

Second, the suit by the Idaho Department of Fish and Game (plus tribes and others) against the Northwest Power Planning Council was based on the failure of the previous version of the NPPC Plan to meet the requirements of the Pacific Northwest Electric Power Planning and Conservation Act of 1980. In September 1994, the U.S.
Ninth Circuit Court of Appeals ruled for the plaintiffs, writing in part:

"The Council’s approach seems largely to have been from the premise that only small steps are possible, in light of the entrenched river user claims of hardship. Rather than asserting its role as a regional leader, the Council has assumed the role of a consensus builder, sometimes sacrificing the Act’s fish and wildlife goals for what is, in essence, the lowest common denominator acceptable to power interests and DST’s."

At this moment the legal score is two to nothing in favor of the fish, a heartening turn of events to fish advocates. However, it is impossible to say when and how the courts will rule on the revised plans. It is also impossible to predict with any certainty the future of the Endangered Species Act, which is under heavy attack in Congress as this is written. Whatever its faults may be, the ESA has been, on balance, a positive force for salmon and steelhead, and especially the Snake River runs.

In their revised plans, how well have the agencies addressed the shortcomings of their previous plans? There are two major differences between the two plans, both of which relate directly to the improvements necessary for recovery.

The revised NPCC Plan addresses the primary causes of the declines with: (1) dam modifications for river draw downs and spill during the spring smolt migration; and (2) reductions in and ultimately elimination of barging; both changes to start this year.

The NMFS Plan continues to nibble at the edges: (1) study draw downs for five more years while the runs plunge toward extinction, with no draw downs until at least 2002; and (2) continue full throttle on downstream barging.

The correct steps for recovery are very straightforward: emulate the natural river to the extent possible, and keep the fish in the river.

Economics

To account for all of the financial factors involved in the Columbia/Snake River runs, dams and river users would require a major study well beyond the scope of this article. However, a few reasonably straightforward points can be made about the economics of this issue.

Value of the Sport Fishing Industry

Most of the commotion on the economics has centered on the costs of the recovery plans, especially to the special interest users, including the Direct Service Industries (a trade name for ten aluminum companies), the electric utilities, the bargers, and the irrigators. This discussion has completely ignored two job and income producing industries, sport fishing and commercial fishing, which are in steep decline due to the failing runs. The figures in the following table were taken from a study by the American Sport Fishing Association on the 1991 economic value of salmon and steelhead sport fishing in Washington, Oregon, and Idaho.

<table>
<thead>
<tr>
<th>Economic Category</th>
<th>Decline Since</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Expenditures</td>
<td>$491 million</td>
</tr>
<tr>
<td>Total Economic Output</td>
<td>$970 million</td>
</tr>
<tr>
<td>Personal Income</td>
<td>$583 million</td>
</tr>
<tr>
<td>Jobs</td>
<td>36,000</td>
</tr>
<tr>
<td>Federal and State Taxes</td>
<td>$ 90 million</td>
</tr>
<tr>
<td>Anglers</td>
<td>1.1 million</td>
</tr>
<tr>
<td>Angler Days</td>
<td>6.8 million</td>
</tr>
</tbody>
</table>

With the closure of the ocean salmon fisheries in the summer of 1994 and in all likelihood 1995, the decline has undoubtedly accelerated since 1991. The Columbia and Snake runs have historically created by far the largest piece of this fishing industry.

In another study, the Northwest Power Planning Council estimated that the decline in Columbia/Snake run sizes due to the hydro system is between $500 million and $1 billion per year in lost fish and jobs. This

The Osprey, No. 24, June 1995, page 5 is 70 percent to 80 percent of the total loss from all causes since the 1800’s.

Clearly, recovery of the Snake River runs will provide a major boost to the sport and commercial fishing segments of the economy.

BPA’s Expenses in Perspective

While the Corps of Engineers built and operates the dams, Bonneville Power Administration is the federal agency responsible for marketing, transmission and administration of the power generated by the dams, and for purchase of non hydro power, including nuclear.

BPA, the special interest power and water users, and some of the politicians, are currently trying to place the largest share of the blame for BPA’s significant financial problems on salmon and steelhead recovery plans. Nothing could be farther from the truth. Underlying BPA’s difficulties are two major problems, neither of which has anything to do with fish.

First, the Pacific Northwest is in the process of changing from net power exporter to net power importer, with the additional purchased power coming at higher cost than the current hydro sourced power.

Second, and more important in the context of salmon/steelhead recovery, BPA is carrying and passing on to its customers, and will continue to for a good many years, the enormous expense of one of the greatest management debacles in American history, the failed Washington Public Power Supply System (WPPSS) effort in nuclear power. In fiscal year 1994, non-operating nuclear expense was $350.8 million, most of it debt for nuclear plants that were never completed. This was 15.5 percent of BPA’s total expense. In 1994, operating nuclear expense was $386.3 million, or 17.1 percent of BPA’s total expense. Combined operating and non-operating nuclear expense was 32.6 percent of BPA’s total expense, which produced 9.4 percent of BPA’s electricity, none of it competitive with other power sources.

In contrast, the total annual cost for the Northwest Power Planning Council’s Salmon Recovery Plan is $177 million.
The Osprey, No. 24, June 1995, page 6

The residential electricity customers of the Northwest are not the problem. A Washington state-wide poll released in March of this year was commissioned by the county Public Utility District operators of five mid-Columbia dams, hardly a group inclined to bias a poll to favor the fish. The poll found that two-thirds of Washington’s residential customers would be willing to pay a modest $5 per month increase in their electricity bills to save the salmon. There is broad public support for salmon recovery. Worst case, with no financial help from the federal government, the NPPC recovery plan would increase Northwest residential electricity rates from 43 percent below the national average, to 40 percent below the national average, still a bargain. That leaves the special interest users as the forces behind those who would let the fish become extinct.

Subsidies

To pin down the exact value of subsidies provided by the government to large vested river users in the form of unusually low rates is extraordinarily difficult. However, a congressional task force report, “BPA at a Crossroads,” chaired by Representative Peter DeFazio of Oregon, identified enough annual savings potential for BPA in administrative efficiencies and reduced subsidies to DSIs’ bargers, irrigators, and the Bureau of Reclamation to more than pay the $177 million annual cost of the Northwest Power Planning Council salmon recovery plan.

For example, through an arrangement that for the last several years has tied their power rates on a variable basis to the depressed world price of aluminum, the DSIs’ (aluminum plants) have been paying BPA less for their power than the 2.7 cents per kwh wholesale rate paid by the electric utilities. For this, the DSIs’ use about one-fourth of BPA’s power, about one-eighth of all the power in the Northwest, and provide 0.2 percent of the jobs in the Northwest. Given that nearly every job is important, there is still a serious question as to whether the current arrangement between the DSIs and BPA is a good deal for the people of the Northwest. It is certainly a bad deal for the fish.

Quality of Life

The biggest shortcoming of all the economic analyses is that they have ignored the contribution of the salmon and steelhead to quality of life. To many of us who fish, these magnificent creatures are the defining essence of Pacific Northwest quality of life. No economic analysis can be considered complete without including a healthy positive quality of life financial contribution due to recovery of the fish.

Action Required

So what needs to be done? Specifically, you need to ask your representative and senators to support passage of appropriations to implement the December 1994 Northwest Power Planning Council “Strategy for Salmon” in the Columbia and Snake Rivers.

As mentioned earlier, the moneymaking special interests are in Washington D.C. regularly, calling on your legislators, working against this recovery plan, or any plan that might raise their costs. Their money talks, and the only antidote is the angry voices of voting constituents. You need to tell your representative and senators in no uncertain terms that Columbia and Snake River salmon and steelhead rank high in your priorities and must be saved and brought back to abundance. You need to tell them that those of us who love these fish are on this issue for the long haul, and will hold our elected officials accountable. And you need to tell Senator Slade Gorton of Washington that it is simply unacceptable for him to suggest that we let some of these runs go extinct. After all, that is what we have been doing for the last 60 to 100 years, and it is time to draw the line. ▲

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Seattle, WA 98124

R. I. P.

The Osprey and Steelhead Committee lost a long time and steadfast supporter when Charles S. Schuster passes away on May 27. A landscape architect, National Park Service retiree, and resident of Port Angeles, WA, Chuck loved nothing better than boating and wading the fabled steelhead rivers of British Columbia, Washington and Oregon, flyrod in hand. He was a boon companion and will be sadly missed by his many angling friends.

Although it has only ten congressional districts, Washington nonetheless sent more new Republicans to Washington, D.C. than any other state. The trend, naturally enough, also was reflected in the voters' choice of lawmakers who go each year to the state capital in Olympia as a part-time legislature. Where Democrats have held the governor's mansion and both houses of the legislature for some time, in November the voters sent a solid majority of Republicans to the house of representatives and swelled their ranks in the senate to within just one seat of achieving majority control. Mike Lowry, the Democrat governor, did not face re-election. But the one seat difference in the senate has turned out to have made a huge difference in environmental politics in the Evergreen State. And it's impact on the future of steelhead management may yet prove to be pivotal.

With the state senate leadership still controlled by Democrats, but the house now under solid Republican control, it was predictable at the January opening that most bills with any kind of partisan flavor would face tough going, no matter their individual merits. And unfortunately for fisheries management issues, the governor and the legislative leadership saw the 1995 session as concerned primarily with other matters, the state budget (including, especially, education costs), healthcare reform, and tax policy among them.

As it happened, in 1995 the principal legislative task affecting fisheries was to define the authority of the expanded fish and wildlife commission, long considered a most important friend of wild steelhead management. But in the prevailing climate, this clearly was not a big deal on the legislative priority list.

Still, two relevant bills emerged from the two branches. One, born in the Republican-controlled house natural resources committee, was essentially written by the commission itself and included all of the recommendations the commission had formally made to the legislature, based on a year-long, state-wide survey which attracted far-reaching and thoughtful public participation. It overwhelmingly recommended that the commission re-acquire the authority to hire and fire the fish and wildlife director (presently appointed by the governor) and to develop and oversee his budget.

The senate’s natural resources committee, controlled by Democrats, produced a bill which kept the appointment authority in the governor’s hands and was less direct about budgetary authority.

This bill eventually died in committee.

Governor Lowry continued his public and private opposition to any change in his authority to appoint the fish and wildlife director, notwithstanding many attempts by knowledgeable and respected voices to change his mind. And he made it very clear to Democrat leaders in both houses how he felt about this particular issue.

The house bill was approved by a large majority on a house floor vote (including support from Democrats). When it reached the senate’s natural resources committee for hearings, the Democrat chair, Kathleen Drew, opposed the bill on the record but her colleagues nonetheless voted it up and out because the Democrat majority knew that at its next stop, in the senate’s ways and means committee, it would languish indefinitely. In fact, the ways and means chair, Nita Rinehart of Seattle, actually interrupted in mid-sentence a Republican motion to consider, rapped her gavel and dismissed the committee. A more flagrant violation of public trust—to arbitrarily deny an up-or-down vote—is hard to imagine but this is "politics as usual." (This particular event went completely unnoticed in major news outlets.)

One level up, on the Democratic side, senate majority leader Marcus Gaspard of Puyallup was unwilling to buck the governor and refused to use his influence to get the bill out of ways and means and onto the floor of the senate. This is where the issue lay at the close of the regular session, notwithstanding that by now a year’s worth of testimony and expert opinion overwhelmingly supported the commission’s recommendations and the house bill.

These tactics of course are old hat. A committee chair, by doing nothing, or by obfuscating as quietly as possible, and by acting in quiet and informal concert with others of like mind, is much less exposed to public memory at election time than a governor who has to veto part or all of a bill that has passed both houses but which he happens not to like. The chairpersons and their committees are safe and the governor incurs one less headache. In this instance, the governor had made public his clear intention to veto all or parts of the bill if it ever reached his desk.

Enter now state senator Dean Sutherland, a long-time Washington sportsman and lawmaker who had chaired the house natural resources committee in 1987. In that legislative session the appointive power was taken from the commission and given to the governor, in a desperate exchange for a gubernatorial promise to significantly improve funding for wildlife. Sutherland, and his supporters (included among many The Osprey), had watched for eight years as two governors failed to carry out their end of the bargain. They had appointed two controversial wildlife directors and, after the first year, failed to provide the promised money. Worse, during the same period, stocks of virtually every salmonid managed by the department had visibly deteriorated, some catastrophically.

During the legislature’s extended special session, now into mid-May, Sutherland
broke with his Democrat caucus, introduced his own bill and saw it pass on the Senate floor as Democrats walked out, refusing to be counted on an issue about which they knew the governor to be "off the wall." But to avoid the veto threat, Sutherland crafted the bill, otherwise identical to the bottled-up house version, to include a provision for referendum to the voters. Under Washington law, this denies the governor opportunity to veto the legislation: The voters will decide in November.

Meanwhile, the new fish and wildlife department continues to operate under a director who shows little, if any, interest in developing a close working relationship with the commission. His steelhead managers appear to be uncertain about policy direction, and are reported to be working in an atmosphere not unlike that which follows a hostile takeover in the corporate world.

Outrageously worse, the governor now publicly accuses the successful legislation's effect to re-ignite the "Indian Wars" of earlier decades, claiming that an empowered commission will deny treaty rights and revert to the "good old boy" management of fisheries whereby only the sportsmen will have real influence.

The governor's terrible reaction to all of this would be funny if it were not serious and even embarrassing to cooler heads. The governor, after all, will continue to appoint individual members of the commission, something he has always done and a part of the system that has never been seriously challenged. But his sophomoric philosophy about his appointive power ("if you don't like my wildlife director you get rid of him by voting for a new governor") is just plain wrong and his repeating it at every opportunity doesn't make it right. Wildlife management cannot afford the risks of partisan shifts in leadership every four years.

All of this leaves the FFF Steelhead Committee in a continuing mood of anger and frustration. As we have commented in these pages over the years, a few volunteer activists simply can't cut it in the face of the political forces at work in state capitals, at least not in Washington's. The situation reported here is an obvious example of the public's clear preference being thwarted by key elected officials who think they are immune to constituent wrath or are in safe districts where "no one cares."

We are of course deeply grateful for Sutherland's last-ditch heroics, but they should have not been needed if the system worked. And a public referendum at the polls will demand thousands of volunteer hours that could be more productively used elsewhere. The commission issue is not very big, or even known, in the minds of many citizens and a tremendous informational campaign will be needed to counter the governor's bully pulpit.

How to make the system work better? As the Osprey has pleaded for years, individual constituents, you readers, simply must let your elected officials know what you think and advise them to remember your cards, letters and phone calls at election time.

Lest readers think it's not worth the trouble, don't believe it. If the Steelhead Committee has learned nothing else in its eight-year history, it is that elected officials very definitely are influenced by constituent voices, if there are enough of them. That is why it is crucial that club leaders—presidents and boards of directors—listen to their conservation chairs and committees and challenge their memberships to write and phone, en masse.

We know, for example, that if only a few letters are received on a specific issue, the legislator assumes there's not enough interest to require his/her attention, much less to change positions.

But when, say, 50 to 100 messages descend, on the same subject and within a short period of time, that same legislator has to assume that there are a lot more out there who feel the same way but haven't bothered to communicate. So there is real leverage available to us, but only if enough of us bother to create it.

This fish and wildlife commission issue now will be revisited in November. Now is the time for everyone to make a note about the election and the referendum which will appear. Urge your friends and neighbors to get out and vote for it. Use your clubs and boards to inform and to cajole. This may be our last chance to get this job done right.

Wanted: Old Fish Stories from Old Timers

Ed Henke, a retiree and supporter of wild steelhead, wants to publish historical evidence of populations and locations of West Coast salmonids, particularly steelhead in the coastal rivers of southern California. Readers who can help should write to him directly: Ed Henke, Historical Research, 769 Lisa Lane, Ashland, OR 97520 or call collect (503) 482-9578. Ed writes:

"I am in the process of accumulating historical data and documentation involving the great runs of anadromous/migratory steelhead/trout (and salmon) that once abounded in the southern California coastal waters within the counties of Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino, San Diego, Riverside, and Mexico/Baja. These are some of the rivers/tributaries/creeks along with some estimates of historical populations: Santa Ynez River system (30,000); Ventura River system (10,000); Santa Clara River system (95,000); also, Sespe River, Santa Paula Creek, Pitu Creek, San Gabriel River, Los Angeles River, Santa Ana River, Santa Margarita River, San Diego River and many others. The old timetarget group which may have the needed documentation and/or anecdotal information are those persons born from the turn of the century through 1920s. I need the names, addresses and phone numbers of such folks, their diaries; also, pictures of salmonids, rivers, watersheds; newspaper articles, books, periodicals, postcards anything relating to these fish populations. My research window covers 1542 (very early Spaniards) to 1955, but later data also will be welcome. The Henke family are long time residents of Ventura County. We have a great respect for these precious natural resources and I have decided to commit some of my retirement time to this project. The final product will be a book, organized by counties and including as many historical facts as I can gather. I will give full credit for any submissions, each of which will be a valuable contribution to the project."
THE CHAIRMAN’S MEND

As The Osprey goes to print, the US Senate Environment and Public Works Committee is finishing up a round of public hearings on the Endangered Species Act. Some members of the newly elected Congress have been proselytizing for radical reform of the Endangered Species Act to restore "balance." Meanwhile the House of Representatives recently eviscerated the Clean Water Act.

"Balance" scares the hell out of me. Upon hearing the phrase, I am inclined to look about with alarm as politicians, timber companies, polluters, grazers, irrigators and such urge changes in the ESA to "balance" their need or even right to abuse the environment for profit against the competing requirement of all life forms for healthy, sustainable ecosystems. As if to make sure we all understand what he has in mind regarding balance, Senator Slade Gorton recently invited lawyers for the aluminum, timber, mining, and agricultural industries to re-write the ESA, removing all those troublesome provisions requiring responsible stewardship for our planet and the creatures that inhabit it. Somewhere between Webster’s definition of balance—equality between the two sides of an account or proposals—to lamentations from the so-called property rights folks to "balance" the ESA, we have stopped communicating in English.

How is clean water balanced with regulations which permit it to be polluted? The former is life-giving, the latter life-threatening. Some balance.

There has been a good deal of arm-waving that the ESA requires government action to save every creature and fails to account—balance (sic)—the needs of humans. Both assertions are nonsense. Even a cursory examination of the facts underscores that the government goes to incredible, probably even illegal, lengths to accommodate harmful human and industrial practices, the ESA notwithstanding. For example, the National Marine Fisheries Service did not list Snake River sockeye salmon until the population had dwindled to single digit runs. Even then, with extinction imminent, NMFS refused to act on its own. Instead, citizens had to petition the government for listing. Now four years later, the U.S. government still has not developed a recovery plan for sockeye. The sockeye salmon recovery plan proposed by the National Marine Fisheries Service essentially ignores the main cause of salmon mortalities—dams.

People, not the ESA, have caused the alarming, coast-wide declines of coho, Chinook, steelhead and searan cutthroat populations. The only purpose for gutting the ESA is to insure that human caused extinctions may go forward without a lot of yelling and screaming for protective steps under the legal protection of the United States government. Contemplate a West Coast without salmon and steelhead—it stagers the imagination! Not possible? It can happen. Wrong. It is happening. On the East Coast, humans wiped out Atlantic salmon in less that one hundred years. Some balance.

The issue is not re-writing the ESA. Long overdue, is a commitment to addressing the causes for and solutions to salmon, steelhead and other species’ declines. Our actions must balance, in word and deed, our responsibilities to our children and our children’s children to not compromise their future against this generation’s profligate short-term excesses which have led to the extermination of creatures, great and small. Our children deserve a future that includes an opportunity to enjoy a world inhabited by a rich diversity of wild species, including salmon and steelhead. That’s balance.

Now would be a good time to drop a note to your senator and congressman with your views.▲

TACKLE FOR SALE

For sale by auction:
Thomas Cemm reel, extra spool and line of pioneer steelhead fly fisherman Al Knudson, pictured twice in Combs’s Steelhead Fly Fishing and Flies. Documentation and biographical magazine article included with purchase. Minimum bid $300. Determination of purchaser approximately 60 days after mailing of this issue.

- Bogdan reel: 00 Direct Drive, gold & black, ventilated spool&crank plate. $1150.
- Loomis 15’ IMX for 8-9, sock and case, warrenty card, as new: $395.
- 10 percent of purchase goes to The Osprey.

Contact: Osprey Tackle
1031 Carol Way
Edmonds, WA 98020
(206) 776-1141
WHIRLING DISEASE IN THE WILD

Jerry Kustich

Events of the past several months in at least three of Montana's blue ribbon trout streams leave no doubt that the effect of whirling disease on wild trout populations can be devastating. A progressive decline in the numbers of rainbow trout in the Madison River since 1991 led Montana's Fish, Wildlife and Parks agencies to search for some answers in late 1994. Prompted by Colorado officials, well entrenched in their own whirling disease controversy, Montana's FWP wasted no time confirming in December that indeed the 90 percent decline in the Madison's rainbow trout population was attributable to whirling disease. At the same time, a 58 percent decline in brown trout numbers in a section of the Ruby River below Silver Spring near Sheridan alerted FWP personnel to problems there as well. In January whirling disease was confirmed. An 80 percent decrease in brown trout counts in yet another Beaverhead River tributary near Dillon led to one more confirmation of the disease in late March. The popular public spring creek, Poindexter Slough, exhibited the same massive population decline. The presence of whirling disease in the Beaverhead and Jefferson Rivers is a likely possibility based on reasonable assumptions and the general lack of fish reported by astute local anglers.

Caused by the myxosporean protozoa, Myxobolus cerebralis, this parasite's life follows a rather complex cycle. Once the spore stage enters young trout there is a selective tropism for cartilage. Infection causes deformities in survivors and the resulting inflammation affecting the nerves in young fish causes both a black tail and the tail chasing behavior from which the disease is named. The tubificid worms found in anaerobic mud and silt stream bottoms is an important host to an intermediate stage of the parasite when spores released by dead fish are ingested by the worm. After a few months a larger, mature free swimming triactinomyxon spore is released by the tiny worms. This stage has three grappling-like appendages that latch onto a young fish, injecting it with the material for the next round of spores. Infection can also occur when fish eat a tubific carrying the parasite.

The disease was first identified in Europe in the early 1900's. Experts agree that what is known about whirling disease is very little, and it wasn't until the 1980's that even the life cycle of the parasite could be defined. Known primarily from its recurring outbreaks in hatchery fish, the effects on wild trout populations could have been subtle and even overlooked for years in many of the states with so-called marginal wild trout capabilities. From its known introduction into Pennsylvania and Nevada in 1955, the disease has spread throughout a total of 19 states, including the most recent, Montana.

Whirling disease does not directly kill fish. Within the controlled hatchery environment the fish can survive and live a complete adult life, even when released into the wild. But therein lies a major problem. The infected fish still hosts the spores until its death; a time bomb for the existing wild fish. In Montana, where there are no hatchery fish introduced to its rivers, the native fish just started to disappear. Apparently young fish so impaired in an uncontrolled setting fall prey to natural selection. Unable to function or even feed properly, the fish are assumed to vanish from the river system at a very early stage of development, victimized by the behavioral result of the disease.

How whirling disease spread throughout several unrelated Montana rivers within the same time frame is still a mystery. Responsible parties will probably never be identified. Some sources believe that there is much more known officially than will ever be revealed. Rumored reports of hatchery fish caught in the West Fork area of the Madison are substantiated by photographs from 1987. A commercial fish hatchery at Silver Spring Creek on the Ruby River closed down in the late 1980's after three somewhat unsophisticated tests for the disease proved negative. Several rainbow trout that escaped the hatchery confines were found in that particular stretch of the Ruby for several years after the facility closed. At Poindexter Slough rainbows flushed into the system from a private pond during the floods of the early 80's inhabited the spring creek for years. They all but disappeared by the late 1980's. Presumably unrelated, the hatchery connection in all these cases is undisputed.

The disease is supposed to severely impact only rainbow trout. Sockeye salmon, golden and cutthroat trout follow as most susceptible. It has been generally accepted that brown trout were only minimally affected even though they still host the spore. In fact, the European brown trout is noted for its ability to resist the negative symptoms of whirling disease. For this reason the dramatic decline in brown trout populations in specific sections of the Beaverhead drainage is puzzling. Perhaps the Americanized version of brown trout has been genetically diluted over the years, losing the ability to tolerate the disease as does its European cousin. Though purely speculative, at this point any hypothesis is plausible.

For obvious economic reasons Montana's FWP must walk the thin line of sound crisis management, tactful news releases, and the needs of the outfitting industry. Many Montana communities depend on fishing based tourism. With little precedence to rely upon, the department has no sure plan as yet to restore the balance—if that is even possible. There is just too little known about the long term effects on a river system that depends solely on natural reproduction. Perhaps the fish that survive will be the strongest and these, the fittest, will be given the chance by fishery managers to multiply unmolested.

Preventing further outbreaks of the disease is perhaps the most important management strategy at present, but with little knowledge of how the disease is spread, this goal may be difficult to achieve. Years of drought and an immense increase in angling pressure this decade had already created a new level of stress on the fish and a concern for their ability to survive man's relentless pressure. In an attempt to make Montana just a little bit better, many private ponds have been built. These unregulated backyard impoundments and their hatchery reared fish can be the entry point for
many other diseases not to mention the perpetuating source of whirling disease.

Recent discoveries also link the disease to sculpins as carriers. Sold as bait, these bottom dwellers are carried and used from one drainage to another. Sculpins have just been banned for use as bait in Montana in another attempt to control the spread. Birds, mud on equipment, and the transport of infected fish remains are also cited as possible vehicles for the disease's expansion.

How neighboring states deal with the disease is also critical. In 1987, Colorado discovered the whirling disease organism in a private hatchery and a state hatchery located directly below the private unit's outflow. Many of its rivers subsequently tested positive for the disease. Presumably, private ponds and hatcheries were blamed for such a widespread distribution of the disease. Colorado's wild trout populations have been severely impacted where the fishery is heavily supplemented by stocking, and now 11 of 13 major Colorado river systems have confirmed whirling disease infestations.

Colorado's Division of Wildlife has decided to live with the disease because it officially believes there is no feasible way to control or fight it. This policy thus allows the state to continue to plant infected fish into systems that already have the disease. Unfortunately, this policy does not allow a river to heal itself, and worse, with no real knowledge of how the disease is transported, other states throughout the west may be victimized by Colorado's laissez faire approach. A blind faith belief that hatcheries are a cure-all for all our cold water fishery woes could well be the undoing of the wild salmonoids throughout the West.

It is interesting to note that even New York State is battling a recent outbreak of whirling disease in its most venerable institution, the Caledonia Hatchery, which was responsible for rearing the earliest Great Lakes steelhead stocks in the 1870's. It is not known how the disease was introduced into this spring fed system, but all precautions are being made to control its spread. New York's DEC is greatly concerned that such an outbreak could jeopardize its wild trout populations of Lake Ontario steelhead.

Given the accelerated expansion rate of whirling disease throughout the West since the late 1980's, the concerns regarding the wild steelhead of the west coast should be obvious. Though Washington, Oregon, California, and Idaho already have confirmed cases, this year's developments in Montana's wild fish ought to send a resounding alarm to those fighting on behalf of the continually battered steelhead populations. An outbreak of whirling disease in wild steelhead could even break the spirit of this most resilient species of fish ever to swim. The threat should not be taken lightly. All concerned need to understand that the destruction left in the wake of whirling disease has the potential to change the essence of our wild rivers forever. Furthermore, the distinct connection to hatchery reared fish ought to send a clear signal to re-evaluate this tool in the management scheme of our fisheries. For any steelhead rivers teetering on the edge, one more adverse factor at this point could push them beyond hope.

STEELHEAD SOCIETY OF B.C. TO VOTE ON BAIT BAN FOR THE THOMPSON RIVER

At the all directors meeting of the Steelhead Society of B.C. in February 1995, the directors passed a motion to ban the use of organic bait on the Thompson River. The Osprey applauds the SSBC directors' decision. Banning bait on the Thompson is years past due. Thompson River steelhead runs are depressed seriously, hovering around 1,000 in a river which should support 10,000-plus steelhead.

The SSBC members include many bait fishermen, some of whom remain unconvinced about the harmful impacts of bait on summer steelhead. In light of this reality, the Society has decided to poll its members on the proposed bait ban. SSBC members should register their opinion not later than August 1, 1995. The resolution reads:

Whereas the Thompson River, with its stock of magnificent, biologically unique, trophy-class trout and salmon (including steelhead), is a world-class angling river, and

Whereas, with the Trans-Canada Highway running along its banks, the Thompson's accessibility makes special regulations necessary—to protect its stocks of rainbow trout and salmon, and,

Whereas present regulations permit anglers to use—as bait—organic material such as fish parts, crusinacean and worms, either fresh or treated, and

Whereas anglers using such organic baits may too easily and repeatedly hook fish, thereby increasing the stress and mortality rates suffered by Thompson rainbows and pre-migrant salmon, therefore

Be it resolved that all organic baits be banned on the Thompson River—from the highway crossing at Savona to the highway crossing at Lytton—and that all artificial lures used there have only one hook, which must be single-pointed and barbless.

Whereas anglers using such organic baits may too easily and repeatedly hook fish, thereby increasing the stress and mortality rates suffered by Thompson rainbows and pre-migrant salmon, therefore

Be it resolved that all organic baits be banned on the Thompson River—from the highway crossing at Savona to the highway crossing at Lytton—and that all artificial lures used there have only one hook, which must be single-pointed and barbless.

Thompson River steelhead congregate in the vicinity of Spence's Bridge. They hold in these runs for months where they are pounded incessantly by hundreds of bait fishermen. As the SSBC resolution notes, the use of bait raises a number of conservation concerns—steelhead mortality from repeated hookings as well as documented mortality to juvenile steelhead and resident trout.

The Osprey position is unequivocal—bait should be banned. However, such a ban does not go far enough. The Thompson should be open only to fly fishing on simple conservation grounds. Fly fishing is less efficient than other methods particularly the use of long-distance weighted lures/baits with spinning and bait casting rod/reel combinations. On a large river such as the Thompson this is important. Fly fishermen cannot reach many stretches of the river, thus ensuring the fish have safe havens in or near every drift. Thus the resource is more easily shared among a larger number of anglers. With less impact on these depressed yet magnificent specimens.

...Thompson, cont. to page 20
Bob York has probably travelled to more steelhead rivers, caught more fish and more truly large fish using a fly rod than anyone else. His dedication to the sport and to working to save the wild steelhead from extinction earns him a prominent place in the first rank of our numbers.

When I wrote the following material I reflected upon how short a period the golden age of steelheading encompassed. When one thinks in terms of the millions of years in time, it is some luck to have been a part of it.

Upon reading the Reminiscences of others in earlier Ospreys I noticed they did not give a large picture of how the steelheading experience was in their days. I have attempted to do so. This is especially so because it is about "the river." That can only mean British Columbia’s Kispiox. No other river reflects the whole of the sport as the Kispiox does. No water has the tradition, mystique or vagaries. No other offers a run of steelhead with such individuality of size, habits or desires. There are fish for tiny dry flies and fish for huge wet flies. Thus, to understand the Kispiox intimately is to know more than is possible from any other river and gives one a most solid base for the sport.

Kispiox regulars go about their sport with a relaxed and steady intensity. They are so regular that their habits and skills become finely honed to perhaps near perfection. Within two hours of my first visit to the Kispiox I had looked around at the majestic setting and observed the beautiful intimate river and its steelhead and knew I had found my river. Then I watched Karl Mausser and his friends and knew I had found the best anglers.

One need not delve far into the past to recall the "good old days" of steelheading for most serious problems with the sport are not a lot more than a decade old. They are always the same: loss of the fish population by excessive kill from commercial or sport interests, loss of habitat by land or water abuse, and angler crowding.

It is the usual case at the Kispiox, even though its residents and visitors are among the finest conservationists and gentlemen I have encountered in the sport. And this includes the native population which I like and admire greatly. Not only do the natives not target steelhead with their gilt nets as they obtain their yearly supply of coho salmon in the adjacent Skeena River, but they most often release their sport caught steelhead. I have witnessed this season-long during the last several years.

Although the Kispiox steelhead are greatly aided by catch and release steelheading, in recent years the run has been subjected to nets from four sources. Those sources are high seas drift nets, nets from Alaska and British Columbia commercial netters, and native nets downstream in the Skeena River.

The Kispiox is unable to withstand a lot of land abuse. The resultant riverbed siltation and widening from logging in recent years has produced tremendous loss of holding water and decimated the steelhead population. But the news is not all bad. Somewhat at least the fish have adjusted by utilizing to a greater extent areas that contain extensive ledge rock formations. Nevertheless, it appears to me that in recent years there is far less than half the former steelhead population, and perhaps less than a quarter. And this river has held up better than many.

All at once a few years ago the Kispiox became crowded because of the advent of guiding. Some interests in the BC Ministry of the Environment disagree with this claim. I regard their argument as ridiculous as I have been there continuously for 20 years and have never observed the presence of one of their guides. Perhaps they were promoting their own obvious purpose. They cannot fool the ones who are there, and resident guides who I visit agree with me.

An Annual Kispiox River Fishing Trip

In early September, 1977, I started my usual at that time three week sojourn along "the river" as it is referred to by some regulars. I anticipated a usual sort of trip. In those days I often was accompanied by a girlfriend who was good in camp and in fishing and such was the case this year. Anglers liked to see me in this situation as, of course, I fished less. The girlfriend usually would fish much less than I so I would concentrate on stationing her in the right place at the right time and there was no problem.

In those days many long-time anglers customarily had a regular pool they started each day with and that might last for weeks if he liked it. Other anglers would not come where he was because they knew he would be there, and there were enough locations for all. One year the late Clarence Walsh from California had the then fabulous Raisin Bread Pool all to himself for the whole month of September. No one else ever went there. The day of his absence I made a quick pass through and landed three steelhead. One year after Clarence passed on, Jerry Mahony, Jim Wright and I were fishing the pool one morning. They would fish the adjacent Dundas and Root Cellar runs that were more suited to their float lines, while I agreed to fish the deeper water of Raisin Break where a sink-tip line worked best. Such a sacrifice it was as alone each morning with pounding heart I would observe the gorgeous pool with big steelhead freely rising. There was no question of whether, simply how many and how large. Day after day it would be three to five and often even into the low twenties. The late Michael Watson who had commanded RAF fighter squadrons in World War II named this pool, and in his time this champion of the river made steelheaders from hopeless individuals by exercising great patience. Traditionally, here, the regulars helped newcomers.

After fishing the run I would then happily walk to meet my companions downstream to visit and perhaps fish some more. It did not really matter, for we were not much in need.

After we settled into using the Kispiox River Resort in 1977, Michael, Paul Tastad and Anita and I went to Raisin Bread. They were all still gear fishers and as I was not yet rigged to fish they did not wait. No one was concerned about this as all knew they did not need to worry about me. They had the water pretty well covered but I picked a spot and cast anyway after they had made several casts. Virtually instantly a small steelhead
STATUS OF WILD STEELHEAD IN THE GREAT LAKES

The following article is based upon the response to questions submitted by The Osprey to the eight states and one province bordering the Great Lakes with respect to the management and status of their steelhead, especially their wild steelhead. Each was requested to provide a brief history of steelhead management for its portion of the Great Lakes, the names of rivers entering the Great Lakes that are being managed for steelhead harvest, the numbers of adult steelhead that are wild and the numbers that are of hatchery origin, the annual kill of anglers caught steelhead and the percentage that are wild, the extent to which the numbers of wild fish may be increasing, the amount and trend of angling pressure for steelhead, policies with respect to the natural propagation of steelhead and for protecting/enhancing stream habitats, the scope and importance of hatchery programs for steelhead, and the extent to which steelhead are being taken commercially and the steps being taken to curtail this. The information is presented essentially in the form it was received.

Because of its length it has been necessary to divide the article into two parts for inclusion in successive issues of The Osprey. Ontario and Michigan are covered in this issue.

Steelhead are not native to the Great Lakes, but for more than a hundred years, following their introduction in the late 1800s, they have been present. They now are found in each of the five lakes and constitute a significant sport fishing resource sought by hundreds of thousands of anglers. All of the states (Michigan, Wisconsin, Ohio, Minnesota, Illinois, Pennsylvania and Indiana) and the Province of Ontario bordering the Great Lakes are actively engaged in steelhead propagation and management.

As shown in Table 1, Ontario and Michigan have by far the largest amounts of Great Lakes frontage.

Table 1. Great Lakes Frontage
(Miles and Percentage of Total Frontage. Not Including Island Frontage, by State/Province.

<table>
<thead>
<tr>
<th>State</th>
<th>Miles</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Ontario</td>
<td>2,838</td>
<td>(42.9%)</td>
</tr>
<tr>
<td>Minnesota</td>
<td>180</td>
<td>(2.7%)</td>
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<td>Michigan</td>
<td>2,176</td>
<td>(32.9%)</td>
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<tr>
<td>Illinois</td>
<td>63</td>
<td>(1.0%)</td>
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<tr>
<td>Wisconsin</td>
<td>673</td>
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<td>Pennsylvania</td>
<td>51</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Ohio</td>
<td>312</td>
<td>(4.7%)</td>
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<tr>
<td>Indiana</td>
<td>45</td>
<td>(0.7%)</td>
</tr>
<tr>
<td>New York</td>
<td>275</td>
<td>(4.2%)</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6,613</strong></td>
<td><strong>Miles</strong></td>
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...Reminiscence, cont. from pg 12

grabbed my fly and it was the only one we got there. Was this a good omen? Michael remarked, "Say, that's a good way to start," I joked, "I hope I get a big one this trip."

In the ensuing days I roamed at will up and down the river with plenty of privacy and fish everywhere they should be. After a few days I still did not have a 20-pounder but then captured a 25-pounder in a small run between Dundas and Root Cellar that was sure fire. I never saw anyone else there, and I got up to three fish quickly at this location at times.

Formerly, Lower Agwedin (potato patch) was often loaded with steelhead, and was renowned for big ones. It was not unusual for from 100 to 200 to be in the pool and flats below. Today, a half dozen is about all one finds. Basically too late one evening I dropped in there. No one was fishing which was not surprising and many steelhead could be seen rising in the tailout. I guessed a fresh run had just arrived. Gordon Watley of the family that has the Kispox Sportsman's Lodge was there on the bank in his pickup in a non-fishing mode having a drink with two native buddies. We exchanged pleasantries as we watched the rising fish and then I suited up. I had lost the fly on my rod and when I reached in my vest for my fly box discovered I had left it back in camp. I told Gordon, "I can't fish, I have not one fly." He laughed and said he had some. I stepped to the water and quickly caught and released a steelhead.

Early the next morning I returned. I was alone and expected to find Karl Mausser, but he didn't show up until later. Since no fish were rising I figured they had either left or settled in. I did not envision all as having left, and if they had settled in undisturbed which would normally be the case they should bite. I was using my unfailing Royal Coachman bucktail, about a 1/0, that Gordon Watley had given me that was ideal for the semi-low and clear water conditions. I don't recall using another fly on that trip; no need. I soon caught a medium-sized doe and then hit an unseen streamer that used the whole river everywhere in the vicinity before leaving perhaps for the ocean full speed. I had to run at a good clip and soon was perspiring heavily in the cool morning air. Whew, who had whom? Well, over one half-mile downstream the 30 pound buck finally gracefully came to the beach. I retraced my steps to my thermos bottle and took a needed breather.

Of course I had carefully marked the spot where I hit the big guy. I took one cast there and then moved the normal six feet for the next cast. Immediately I was into the same situation. The same race, the same landing area, and he weighed about 26 pounds.

Upon returning to my thermos I found that Karl Mausser had arrived. I told him the run was his as I had more than I wanted, and I triumphantly left. In the evening I returned with Kispox-regular Greg Nylander and we were alone there. He seemed to lack confidence in the fly and fished mostly gear. As we entered the tailout he started to step in dutifully behind me. He was shocked when I, a fly fisherman, told him to go ahead of me. I said, "You'd better for you will catch nothing if you follow behind me." Ahead of me he lost one fish and quickly landed four of seven hooked. I had the right fly and I also knew as the regulars knew that the river was perfect for fly fishing. It remained that way the whole time I was there. This was not unusual before the watershed was denuded by logging. It had been an above average trip and I landed 77 steelhead and even did a bit of trout fishing in nearby lakes. I don't recall how many Anita caught but no doubt it was, as usual, enough.
The Osprey, No. 24, June 1995, page 14

Ontario has frontage on lakes Superior, Huron, Erie and Ontario; Michigan on lakes Superior, Michigan, Huron and Erie; Wisconsin on lakes Superior and Michigan; Ohio on Lake Erie; New York on Lakes Erie and Ontario; Minnesota on Lake Superior; Illinois on Lake Michigan; Pennsylvania on Lake Erie; and Indiana on Lake Michigan.

Because of the decline of steelhead populations, sport fish regulations for the streams and some river mouths currently are under review.

Bay area. By the 1920s, naturalized populations existed in most streams and today they are self-sustaining in all suitable tributary waters. Stocking occurs only at the lake’s east end near Sault Ste. Marie.

Most tributaries of Lake Ontario on the Canadian side have runs of steelhead. Larger tributaries that have been stocked or have natural runs include the Niagara River, Bronte Creek, Credit River, Humber River, Rouge River, Duffins Creek, Bowmanville Creek, Wiluat Creek, Ganaraska River and Shelter Valley Creek. For Lake Ontario proper and at most stream mouths the steelhead fishing season is open all year. Tributary streams generally are closed to angling during spring migration and spawning periods.

Lake Huron tributaries with runs of steelhead are Bayfield Creek, Gullı Creek, Naftel’s Creek, Maitland River, Lucknow Creek, Underwood Creek, Little Sauble Creek, Riverton Creek, Andrew Creek, Lorne Creek, Pentantie River, Saugeen River, Stoney Creek, Sauble River, Kicker Creek, Sideroad Creek, Willow Creek, Crane Creek, Seller Creek, Spring Creek, Stokes River, Colpo’y’s Creek, Oxenden Creek, Johnson’s Creek, Indian Creek, Polwater Creek, Maxwell’s Creek, Sydenham River, Bothwell’s Creek, Keffler’s Creek, Bighead River, Nottawasaga River, North River, Copeland Creek, Hog Creek, Sturgeon River, Coldwater River, Nottawasaga River, Pretty River, Silver River, Indian Brook, Bauteaux River, Carp River, St. Mary’s River, Root River, Garden River, Echo River, Thessalon River, Mississagi River, Blind River, Serpent River, Spanish River, Srigley Creek, Minkomoya Creek, Timber Bay Creek, Houghson Creek, Manitou River, Bluejay Creek, Rodger’s Creek, Kagawong River, Bickel’s Creek and Maple Creek.

Because of the decline of steelhead populations, sport fish regulations for the streams and some river mouths currently are under review.

Steelhead have been caught in the following Lake Superior streams: Agawa River, Angler (Sturdee) Creek, Barrett’s Creek, Batchawana River, Black Sturgeon River, Blende Creek, Blind Creek, Boston Creek, Carp (Sable) River, Cash Creek, Cedar Creek, Chippewa (Harmony) River, Cloud Creek, Coldwater Creek, Current River, Cypress River, Dead Horse Creek, Dublin Creek, Gimlet Creek, Goulais River, Gravel River, Haviland (Black) Creek, Hewiston (Selim, Whitesand) River, Ishkibibble Creek, Jackfish Lake Tennon, Jackfish River, Jackpine River, Kaministikwia River, MacInnes Creek, McKenzie River, McIntyre River, McKeillar Creek, McLean’s (Sox) Creek, McVicar Creek, Mink Creek, Montreal River, Needing River, Nipigon River, North Trout Creek, Old Woman river, Ozone Creek, Pancake River, Pitch Creek, Portage Creek, Prairie River, Queminico (Alona Bay) Creek, South Trout Creek, Spring Creek, Squaw Bay Creek, Steel River, Stillwater Creek, Stokely Creek, Unger Creek, White Gravel River, Whitefish River, Whitewood River, Wild Goose Creek and Wolf River.

Since harvest and possession limits apply to all streams running into Lake Superior, it can be said that all are potentially managed for steelhead. In addition, small tributaries in the Sault Ste. Marie area have additional protection through the creation of spring sanctuaries during the spawning migration.

Twenty percent is the best estimate of the ratio of naturally produced steelhead in Lake Ontario. This figure was derived from fish sampled from Lake Ontario boat anglers, May to October, and thus cannot be applied to individual tributaries. Anecdotal information suggests that a much higher percentage of wild steelhead are caught in northshore streams such as the Ganaraska River.

The harvest of steelhead in Lake Ontario and its tributaries has never been fully addressed. The province has monitored the boat fishing harvest and estimates that it represents about one-third of the total steelhead harvest. The boat fishing harvest peaked in 1986, with about 50,000 being harvested. Declines in rate of harvest and fishing effort have reduced current levels of harvest to less than 10,000.

From the Ontario waters of Lake Huron, sport fish harvest data are only available for
the southern portion of the lake. Steelhead harvest declined from 1991 to 1993, with an estimated harvest of about 10,475 fish in 1991, and 5,007 fish in 1993. Catch rates also declined, from 3.93 fish per 100 angler-hours in 1991, to 2.2 fish per 100 angler-hours in 1993. The decline in harvest is consistent with the declines in abundance observed elsewhere in the lake.

Recently two of the larger rivers also have been surveyed. In 1991 the fall catch from the Saugan River was estimated to be about 869 fish. The 1991 catch in the Bighead River between mid-June and mid-December was 1,722 fish.

In Lake Superior the amount of harvest is unknown. With the exception of some limited stocking at the east end of the lake (Tatchawana Bay tributaries), all fish are from wild production. In streams where stocking does occur there are poor returns. As a result the Lake Superior steelhead fishery is dependent upon wild production.

The province suspects that the production of wild steelhead from Lake Ontario tributaries may have decreased in recent years due to a series of relatively dry summers, but considers the long term prognosis good.

Since 1989 in Lake Huron there has been concern with the declining abundance of steelhead in south-western Georgian Bay. In 1993, concerns were also expressed about declines in the tributaries along the south shore of Manitoulin Island. In the eastern main basin of Lake Huron, fish runs appear to have increased. Upon closer examination of the data, it was found that the number of stocked fish has increased (reflecting stocking efforts in the main basin), while the percentage of wild fish has remained stable or even declined.

The declines in spawning have been attributed to the production of poor year classes in the late 1980s when low stream flows and high water temperatures likely limited survival in streams. Other factors such as exploitation and habitat loss may also have had a bearing. There also is concern about the impact of supplemental stocking (i.e. stocking a different genetic stock “on top” of wild populations) and its effect genetically and/or behaviorally on wild populations.

The province has no evidence that Lake Superior steelhead numbers are increasing. Anecdotal reports suggest the steelhead population may be present but stable.

The amount of angling pressure and trend in Lake Ontario waters for all trout and salmon peaked at about 800,000 angler-days in 1989. In that year it was estimated that steelhead comprised 31 percent of the total harvest. In 1993 fishing was estimated to have declined from the 1989 level by about 35-40 percent and that steelhead accounted for only 16 percent of the harvest.

In Lake Huron the province does not have a total estimate of angling pressure for the 10 percent of the lake. However, there are estimates of total effort for the southern Georgian Bay for the April to October fishing season during recent years. Total angler effort there was about 650,000 rod-hours, of which about 40 percent was directed at steelhead. In a recent Saugan River survey the fall effort was about 32,000 rod-hours.

No measure of angling pressure on Lake Superior streams around the Canadian shore has been made. Anecdotal reports suggest that pressure is growing in terms of both local anglers and those from the nearby states because of low fish-abundance in the waters of those nearby states.

Ontario’s strategic plan for its fisheries recognizes steelhead and other naturalized non-native species as valuable components of the fishery which are to be managed as part of the aquatic community.

Steelhead may be stocked in the Great Lakes to establish self-sustaining populations, or to provide hatchery dependent fishing opportunities. Many Great Lakes tributaries support healthy self-sustaining steelhead populations. Plantings of hatchery fish “over” wild populations is discouraged because of concerns related to the loss of fitness of wild stock, over-harvest of wild fish, and interference/displacement of wild fish from spawning areas.

Hatchery reared steelhead stocked in the Great Lakes are derived from Great Lakes populations in order to maximize post-stocking survival and to minimize the potential for negative genetic impacts on wild stocks.

Habitat management activities that have benefited steelhead populations include efforts to prevent further degradation of tributary habitat, and efforts to increase suitable habitat through stream improvement programs. Removal of barriers to upstream migration, operation of fishways, and physical transport of adult fish to upper reaches of streams have increased the quantity of available spawning and nursery habitat.

The degree of rehabilitation and protection activity varies by locality and jurisdiction, but it is used as a management tool to attempt to maintain and increase natural production of steelhead.

The province produces about 450,000 steelhead annually. The majority of these fish, greater than 75 percent, are targeted towards providing artificial fishing opportunities, rather than rehabilitation. Most, about 75 percent, are destined for Great Lakes stocking, and most of those for Lake Ontario. Steelhead also are reared at a municipal hatchery in Sault Ste. Marie (25,000 to 50,000 fish destined for the east end of Lake Superior), and by community involvement groups for Lake Huron (about 650,000 of the 750,000 fish stocked).

The stocking of steelhead is relatively unimportant in Lake Superior where most fish are produced naturally. However, stocking is important in providing fishing opportunities in lakes Huron and Ontario. For Lake Huron, trends at fishways suggest that stocked fish are an increasing component of the steelhead population, while naturally producing fish are declining, a cause for concern. The relative contribution to the fishery of stocked fish, as compared with wild fish, is unknown. Lake Ontario stocking by either Ontario or New York State accounts for over 75 percent of the steelhead caught in provincial waters.
Commercial fishing is under a quota management system whereby conditions of license have season, location and gear restrictions for the purpose of limiting the incidental catch of non-target species. Steelhead is a non-target species and its catch by commercial fishermen is prohibited. From its monitoring of commercial fishing, the province reports that the incidental catch of steelhead appears to be insignificant.

Michigan

The Michigan Department of Natural Resources (Fisheries Division) reports the first steelhead were brought into Michigan in 1876 by Dan Fitzhugh of Bay City. These fish were from California’s McCloud River. The state began stocking steelhead in 1980. These fish quickly naturalized in several streams and have provided brood stock ever since. The steelhead rearing program was expanded substantially in 1968. Egg collections from the naturalized Little Manistee River population have ranged from 1.2 to 8.8 million eggs yearly since 1968.

There are hundreds of Great Lakes tributaries in the State of Michigan. Virtually every one receives at least some migrating fish.

Most main rivers entering the Great Lakes are open to steelhead harvest (three per day). There are a few exceptions around the state where steelhead (or any type of) fishing is banned. These are streams that are either a source of brookstock or have high concentrations of fish that are attractive to illegal activities. Some streams or portions of streams may also be closed to provide protection to spawners in order to enhance recruitment. These include many designated trout streams and streams listed under “exception to general rules by county” as identified in the regulation pamphlet.

Most tributaries that feed the rivers are closed to harvest October 1 through the last Friday in April.

The state estimates the steelhead in Lake Superior are 85 percent naturalized, Lake Michigan 50 percent, Lake Huron 10 percent, and Lake Erie zero percent. These figures would equate to the streams as well. For instance, on Lake Michigan the Grand River (west-central Michigan) is about 40 percent naturalized and the Pere Marquette (northwest-lower peninsula) is 100 percent naturalized.

The state estimates that a total of 130,000 steelhead were harvested in Michigan in 1994. This includes a harvest of 52,420 fish from the lakes (from creel census counts), and a harvest of 77,580 fish from lake tributaries (based upon the belief that 40 percent of the harvest occurs in the lakes).

The St. Joseph River, a 63 mile stretch of river that has five fish ladders on the first five dams, is the only river in Michigan with a yearly census. Anglers harvest 6,000 to 15,000 steelhead per year. In 1994 they harvested 11,572, while releasing an additional 4,137. Total catch per hour for the St. Joseph River has varied from 0.03 to 0.08. Total fishing pressure in 1994 for the St. Joseph was 94,000 angler days, 104,000 angler trips, and 380,000 angler hours. In addition to the harvest of 11,572 fish in 1994, 13,071 other steelhead were passed at the first ladder. It is not uncommon on the St. Joseph for a good angler to catch 5-10 steelhead a day during runs.

In Lake Michigan, where 50 percent of steelhead are believed to be naturalized, only 15 percent of those harvested are wild. Therefore many more hatchery fish than wild fish are being kept.

The state record for steelhead is a 26 pound, 8 ounce fish.

The state believes at present that it is sustaining its steelhead populations and is on the verge of increasing them. A research project now is underway to determine their status.

In 1992 Michigan sold 275,000 trout stamps. In addition, 230,000 single daily fishing licenses, 135,000 senior licenses, and 88,000 sportsperson licenses were sold. These all allow an angler the opportunity for trout/salmon fishing. While not all fish for steelhead, the state estimates that 50 to 75 percent do.

As for angler pressure on Great Lakes steelhead, this has been increasing substantially the last four years as the Chinook fishery has declined. Traditionally, a greater share of the total steelhead harvest has been from streams than from lakes. However, the share of stream harvest is declining. In 1985 and 1986 the stream harvest was 86 percent. It is now only 61 percent as an ever greater share of steelhead anglers concentrate their efforts on the lakes.

Some streams, such as the Pere Marquette, have heavy fishing pressure, while others with significant runs of steelhead have almost no pressure. Overall the state believes that even though a greater share of anglers are turning to lake fishing, the number of anglers attracted to the streams continues to grow.

Michigan actively seeks to protect and rehabilitate stream habitats. For example the state has reached agreement with one power company (Consumers) and with FERC concerning the operation of several dams on major Great Lakes tributaries. Under the agreement stream habitats in those reaches below dams will be substantially improved to the benefit of steelhead and other species.

The state also actively works with groups such as FFF and TU to rehabilitate the smaller tributaries, many of which are vital for natural propagation.

Presently, without hatchery stocking, some streams (including the St. Joseph) and certainly much of the Great Lakes would not provide good steelhead fishing. The state now stocks roughly one million steelhead each year. Seventy-five thousand of those are Skamania strain.

In the short run, separate regulation may be required for naturalized and for hatchery fish in the hope of increasing the runs of wild fish and decreasing the dependence on hatcheries. In the long run the goal is to increase natural propagation and decrease the dependency on hatcheries.

At present there is no licensed commercial steelhead fishery in Michigan.

(Eds., to be concluded in the next issue of The Osprey.) ▲
We appreciate your viewpoints and comments. Write to us at: Editor, The Osprey, P.O. Box 84211, Seattle 98134.

Department of Ichthyology
Moscow State University
Vorobyovy Gory, Moscow 119899

May 23, 1995

Dear Editor:

It gives me great pleasure to read of the results of the first steelhead expedition to Kamchatka published in The Osprey and to acknowledge the support and participation of the Steelhead Committee of the Federation of Fly Fishers. The second expedition of the Kamchatka Steelhead Project will take place in the fall of 1995. In connection with this, I would like to say a few additional words about this project, the organizational principles and conditions which permit it to be realized, and the ramifications of the special status of steelhead as a rare and vanishing species.

The goal of the long-term Project, which is planned for 20 years, is evaluation of the current state and continuous monitoring of the species Salmo mykiss in its habitat, as well as working out an environmental protection and fish preservation system which will make it possible to restore and preserve the populations of steelhead in Kamchatka and in North America.

Kamchatka steelhead (Kamchatskaya seomga) is the only wild population of the species in the world which, unlike American populations, has not suffered genetic influence as a result of fish culture operations at fish hatcheries. The places which it inhabits in Kamchatka have not been violated, and the species in this region has retained its natural population structure. In this connection, Kamchatka mykiza (steelhead) is a unique resource for the preservation and restoration of the species as a whole on the Asian and American coasts.

However, in recent years, as a result of uncontrolled fishing, the numbers of the Kamchatka populations, especially the anadromous form on the western coast on the peninsula, have diminished dramatically. As a result, the anadromous form (steelhead) was entered in the Red Book of Russia in 1983 as a protected species. Since that time, the situation has become even more critical, as Kamchatka has become a region in which all forms of business are growing, including those connected with the exploitation of fish resources. In these new conditions, Kamchatka steelhead may become exposed to more severe human influence, and be threatened with extinction. It has become urgently necessary to conduct a rapid inventory and establish continuing monitoring of the species.

This is the situation which served as the basis for a long-term joint Russian-American project conducted by the Wild Salmon Center and Moscow State University.

Carrying out the project is impossible without the support of Russian government organizations. This is because Kamchatka steelhead is listed in the Red Book of Russia and belongs to the category of rare and vanishing forms. According to Russian regulations, permission for capturing specimens of species or forms listed in the Red Book, even for a very limited number of specimens for scientific study, can be issued only by the Ministry of Ecology and Environmental Protection. Such permission would have to be obtained by any group proposing to fish for steelhead as even catch and release methods are not absolutely harmless to steelhead. The stress which steelhead undergo during capture and release unquestionably has some influence on the subtle physiological-biological processes in the organism. Therefore, the impact of fly fishers who want to fish for Kamchatka steelhead must be restricted and controlled carefully. At the same time, it is extremely important that the "labor" of such recreational fishers not be wasted; it is needed to be science.

A wonderful aspect of the joint Kamchatka Steelhead Project is that it is being realized through the joint efforts of scientists in Russia, the United States and Canada with the active participation of recreational fishers. These sports people have already provided and will continue to provide invaluable assistance in the collection of scientific specimens and samples, and in the conduct of field observations. Recreational fishers are full-fledged participants in our expeditions, who work in the framework of our scientific program. They collect scientific samples in different places and at different times according to a single method and system. The importance of their contribution to the scientific part of the project would be hard to exaggerate.

According to the laws of Russia, the capture of species and forms in the Red Book can be done only under the control of representatives of recognized and accredited scientific organizations.

The biological faculty of Moscow State University is the coordinator of all work connected with the study of Kamchatka steelhead. In accordance with the existing long-term Kamchatka Steelhead Project, there are agreements for scientific cooperation between Russian, American and Canadian scientists. It is important that fishing for steelhead by recreationalists take place only as part of the authorized scientific expeditions, working on the joint Kamchatka Steelhead Project of the Wild Salmon Center and Moscow State University.

Only such organization of joint efforts by scientists and fishers will facilitate the successful achievement of the Project and the preservation of unique populations of steelhead trout in Kamchatka.

Sincerely,

Professor D.S. Pavlov
Chairman, Department of Ichthyology
Moscow State University
Academician of the Russian Academy of Sciences
REMINISCENCES

Bill Barnett’s long association with and deep affection for Eastern Washington’s fabled Wenatchee River and for the sport of steelhead flyfishing comes through loud and clear in this reminiscence. He was one of the first to perceive the importance of protecting and perpetuating Washington’s wild steelhead stocks and for many years has worked unspiringly toward this end.

A century ago the great plains were covered with buffalo. In 1850 about 20 million thundered over the Western plains. Forty years later only 550 were alive.

In like manner wild steelhead are only 15 percent of what they were 100 years ago. So, will the wild steelhead in the cold rivers of the Northwest be allowed to survive as a species? I think so, despite the odds. But before I get into the whys and wherefores, I’m going to reminisce about my “golden era” of steelheading on my home river, the Wenatchee. The Yakima Indians called it the Wanetcha meaning “river flowing from the canyon.”

My mentor, and the guy totally responsible for getting me addicted to steelhead on a fly was a Wenatchee butcher and great friend, Carl Fillman. Carl was one of the best. He was a Jack Dempsey sort of guy—strong and quick of mind.

One early October morning Carl gave a soft knock at my back door and with a crescent moon grin said, “Let’s go fishin’.” When Carl said “fishin’” he always meant steelhead fishin’. I don’t think he ever knew any other kind.

A week before Carl had equipped me with steelhead fishin’ paraphernalia. Carl was a Fenwick man and worked a spell for the company along with tournament caster Jim Green. You guessed it, the steelhead rod I was to initiate that morning was a 9 foot, 8WT HMG Graphite Fenwick. The year was 1974 and the steelhead over Rock Island Dam were not in great numbers (averaging between 3,000 and 5,000 fish), but fisheries were nil.

After loading our gear, we headed for his favorite spot, the Sleepy Hollow Pool. The good holding water above the bridge is gone due to several floods since the 1970’s.

Carl showed me how to rig up and soon he had me casting (or trying to cast). I was fishing a #4 Golden Demon tied by Carl using genuine polar bear hair. Carl was starting me on the long and painful (for him) road of learning to cast and to read steelhead water.

It was soon 9 a.m. and Carl has to head for his meat market. He had hooked and released two bright wild fish in the 8 to 10 pound range. I watched with awe as he cast, mended, read water and fought the fish.

On departing, Carl’s instructions were, “Be on the river EVERY MORNING before daylight until you’ve hooked and released your first steelhead.” I obeyed and fished every day except Sunday. After two weeks I still batted zero. Carl came out a few mornings to coach me, but to no avail.

Then, behold! Early one autumn morning, I made (what I did call) a humungous 50 foot cast and no sooner had my Golden Demon hit the water when a nine pound hen nailed it before the fly was two feet under the surface. The battle was on.

Since that first steelhead I’ve probably released around 400 Wenatchee steelhead, some up to 12 pounds, but that FIRST bright hen had burned a lasting impression from among my many rich steelhead years along the Wenatchee.

To my recollection, my most productive years on the river were from 1982 to 1987, when we had as many as 21,000 to 23,000 steelhead over Rock Island Dam, of which perhaps 8,000 to 10,000 were headed up the Wenatchee. Can we ever expect those golden times again? My answer is, we can expect decent returns in the future if we are willing to pay the price now! The price is our individual willingness to go all out to help protect and restore our wild resource, those awesome WILD steelhead. By properly managing our steelhead fishery on the Wenatchee with a goal of restoring the wild fish and minimizing the supplementing with hatchery fish, I believe the river could become the nearest thing to a steelhead fishing shrine one could have.

In 1958 my wife and I built our home on a high bluff overlooking my beloved Wenatchee River. When the river is running clear at about 950 cfs in the fall, I could often spot steelhead in favorite lies right below my living room. I could leave my real estate office in town at 4 p.m. in the afternoon and be on a favorite pool at 4:30, leave the river at 7:30 p.m. and have released two or three nice wild fish.

Back to the subject of paying the price. Bill McMillan, noted author/flyfisher, has these succinct words on what we must work for:

1. Increased public awareness of the importance of wild fish and the environment which supports them.
2. Rehabilitation of wild, self-sustaining fish stocks to observable, fishable and harvestable levels.
3. Coordinated and cooperative planning and management of salmonid and other fishery resources.
4. Increased funding of fish habitat protection and restoration.
5. Better riparian and watershed management.
6. Adequate minimum stream flow and water quality standards.
7. Preservation of genetic integrity of wild fish stocks. Many studies show only wild fish stocks hold the broad range of genetic diversity necessary for long term productivity and adaptability to changes.

On closing, I thought it might prove interesting to interview knowledgeable authorities regarding the future of Wenatchee River wild steelhead. Here are their quotes:

Larry Brown, fish biologist for the Washington Department of Fish and Wildlife:

“Twelve years ago (1983) the Department initiated restrictive harvest rules designed to increase numbers of wild steelhead in the Wenatchee River. The good news is that our efforts have increased the average percentage of wild fish from about eight percent to about 29 percent of the total run. Coastwide downward trends in salmonid survival over the past decade are reflected in a reduction of 32 percent in the average Wenatchee hatchery steelhead return (1977-85 average of 3,964 and 1986-94 average of 2,547).” Over the same period wild steelhead returns have increased 224 percent, from an average of 322 fish (1977-85) to an average of 1,046 fish (1986-94).

Fisheries biologist Chuck Pevee for the Chelan County Public Utility District had this comment:

“YES! We do have reason for optimism for wild steelhead in the Wenatchee River and other areas in the mid-Columbia. We know more about them than we used to. By knowing more about any animal population, we can manage them more appropriately. We know now that juvenile steelhead in North Central Washington may spend up to seven years in freshwater before migrating to the sea. This places more emphasis on retaining the pristine conditions in the upper watershed, where steelhead rear. It is precisely this kind of information that led to the cessation of hatchery releases in areas upstream of Leavenworth in the late 1980’s. Upper watershed areas need preserving, and the migration corridor to the ocean needs improving. Currently, predator control programs at the mid-Columbia hydroelectric projects should improve survival of steelhead to the ocean and other research into
Kamchatka Steelhead Fly Fishing

Building upon the successful 1994 program, the Wild Salmon Center will conduct scientific expeditions in 1995.

You are invited to participate in these scientific expeditions co-directed by the Wild Salmon Center and the Russian Rare Fishes and Biodiversity Foundation. This expedition is endorsed by the Russian government, and top Russian-American fisheries scientists, the U.S. National Marine Fisheries Service and facilitated by the FFF Steelhead Committee.

Expedition #1: three separate groups consisting of scientists, camp assistants and six anglers. The trips are two weeks in duration each and will return to the general area studied in 1994 but will also include visits to additional rivers. Groups depart Seattle Sept. 9, Sept. 21 and Oct. 3, 1995.

Expedition #2: three groups consisting of scientists, staff and six sponsoring anglers. Each trip is two weeks in duration. This expedition will study a second watershed in a remote region on the west coast of Kamchatka. Groups will depart Seattle Sept. 9 and Sept. 21, and Oct. 3. This is a large river system with numerous tributaries.

Each angler will measure, weigh and take scale and tissue samples for DNA analysis. Fisheries biologists from the University of Washington, Moscow State University, B.C. Ministry of the Environment and NMFS will assist and analyze collected data.

This is the second in a series of annual expeditions to help Russian scientists study and save endangered Kamchakian steelhead. A special exemption from their endangered listing will be made for these scientific parties to permit the most-efficient population counts.

Cost: $5,500.00 plus air fare

Anglers are responsible for their own personal gear: clothing, waders, fishing tackle, sleeping bag, travel to/from and accommodations in Petropavlovsk. The expedition will provide all food, field accommodations, local guides/sherpas, air-ground-river transport from Russian airport of entry forward.

For an application or to make a deposit, contact Pete Soverel at (206) 742-4651/(206) 745-9478-fax or John Sager at (206) 243-1940 before June 1, 1995. Reservations by telephone only.

Tent camping will be Spartan but clean and warm. Anglers will help with camp chores. Anglers must be in good physical shape and desire adventure.

cont. from pg. 18, Barnett...

“surface collection” facilities which will guide juvenile fish away from the dam’s turbines may also improve survival.”

Famous steelhead writer/angler Steve Raymond once said: “It’s an exciting time for a steelhead fly fisher because today’s methods and equipment hold bright promise for the future. I wouldn’t trade my memories, but it’s hard not to envy those who are just getting started.”

John Turner, a fly fisherman and director of the US Fish and Wildlife Service, said recently, “We have some extraordinarily effective conservation laws at our disposal. For the present, however, the BEST KEY to protecting our fisheries is INVOLVEMENT.

Barnett, cont. to pg. 20...

“We all know there is plenty of trouble on the environmental horizon for fisheries. Issues like habitat loss, contaminants, stream dewatering and the like will continue to keep headline writers busy.”

“But there’s something else that troubles me deeply. I am worried that too many of our young people, isolated from nature by their urban surroundings, will gradually and un-
Finally, Thompson steelhead are universally recognized as the premier steelhead in the world. They are aggressive, responsive and powerful. Worldwide, with few exceptions, only fly fishing is permitted for Atlantic salmon. Thompson River steelhead compare with any of the world’s Atlantic salmon and deserve nothing less than the similar fly only regulations.

If the BC Ministry of Environment cannot bring itself to adopt sensible, long over due, fly only regulations for everyone, they should, at a minimum, impose such regulations on non-resident anglers.

If you did not receive a ballot, we suggest a note with your vote and membership number to 130 1140 Austin Ave., Coquitlam, BC V3K 3P5. If you are not already a member of the SSBC, oin today and vote no on bait.

(Eds. note: We recognize that, in general, the FFF does not advocate for fly-only regulations because usually so-called selective fishery regulations are good enough: single point, barbless hooks. The Thompson seems to us to be a worthy exception.)

<table>
<thead>
<tr>
<th>IN THIS ISSUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snake River Extinctions 1</td>
</tr>
<tr>
<td>Report from Olympia 7</td>
</tr>
<tr>
<td>Old Timers Stories 8</td>
</tr>
<tr>
<td>Chairman’s Mend 9</td>
</tr>
<tr>
<td>Whirling Disease 10</td>
</tr>
<tr>
<td>Thompson River 11</td>
</tr>
<tr>
<td>Reminiscences 12</td>
</tr>
<tr>
<td>Great Lakes Steelhead 13</td>
</tr>
</tbody>
</table>

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Linda Hanlon, Editor

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cont. from pg. 19, Barnett...

consciously come to regard the term “environment” as a matter of laws and loss. They may realize that toxins impair May fly reproduction, but never learn to savor the magic of the system that drives the nymph from its case and draws the May fly’s wings up into flight.

“I think we need to teach savoring as much as savings. Fly fishing presents the savoring and promotes the conservation of the resource.”

Robert Koenke, publisher of Wildlife Art News said, “Can we learn what we have taken for granted yesterday? Learn from the stream, the air, the forest, the plains and wildlife left abused, tainted and destroyed. What then the future? May our dawn of appreciation start now. Let us come alive with life and learn to live and experience. Within our own private lives, let us open up the world around us and give pause to notice, wonder, praise and SAVE for tomorrow.”

Each one of us can make a difference! Let’s all try harder in this final decade of the 20th Century.

I pledge to do better. Will you?

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