



The Adipose

The Newsletter of the Wild Steelhead Coalition
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The President's Forum

This guest editorial, by our president Jack Berryman, appeared in the most recent issue of Salmon Trout Steelheader, and is reprinted here with the kind permission of STS's editor, Nick Amato.

Why Wild Steelhead Are Important

As President of the Wild Steelhead Coalition (WSC), I represent a Board of Directors and general membership that found Doug Olson's Guest Editorial, "*Wild Fish vs. Hatchery Stock: Any Difference?*" published in the August/September 2002 issue, worthy of a response. Olson, who admitted that he was offering "a layman's random observations," proclaimed that "to this non-scientist...a salmon is a salmon and a steelhead is a steelhead." He concluded by asking, "Will someone please explain where and why I'm wrong?", thus this response from the WSC.

The WSC is dedicated to increasing the return of wild steelhead to the waters of the Pacific Northwest because they are the key to the survival of this magnificent fish. And, because of this belief, we advocate year-round catch and release of all wild steelhead. This does not mean we are against hatcheries. In fact, we see hatchery fish as being very important for future harvest opportunities. But, as our mission statement clearly states: "Hatchery programs must be closely examined and be carried out in such a manner that the negative impacts on wild fish are removed or minimized." Further, the WSC advocates "the mass marking of all hatchery steelhead, and for science, not politics, to be the basis for the re-tooling of hatchery practices."

Olson based many of his conclusions on how a hooked fish fought and noted that it was "difficult to tell the difference until the fin clip is visible." Well, I suppose this may be true for some fish in some places, but my personal experiences and the experiences of those I have polled, have generally seen a noticeable difference in the strength, speed, size and aggressiveness of wild fish over hatchery fish. Anglers who pay a lot of money and travel long distances to fish the Dean, Thompson, Babine, Bulkley, Kispiox, Morice, Sustut, and other fabled British Columbia rivers do so because of the type of fish they hope to catch. The same is true for Washington's Skagit and Sauk or some of the Olympic Peninsula rivers during late spring when the wild fish return. Likewise for all of the anglers who travel to Montana to catch wild trout. Very little of this excitement and quest would occur for stocked hatchery steelhead or stocked trout. Yes, hatcheries have indeed improved fishing for a lot of people and we hope they will in the future, but it is the wild fish that are crucial to steelhead survival and in the end, to steelhead fishing. The fisheries biologists throughout the Northwest who have studied steelhead and salmon as their life's work are universally in agreement that major differences do exist between wild fish and hatchery fish. Staying with Olson's major concern, that of "catchability," anglers on both the Deschutes and the Columbia report they catch more wild steelhead even though there are more hatchery fish in the river. In fact, data

gathered on the Deschutes by the Oregon Department of Fish and Wildlife between 1977 and 1993, show that the catch rate per 100 hours of angling was 5 wild fish to 2 hatchery fish when the wild fish count was 87,000 and the hatchery count was 150,000. Then, their data between 1994 and 1997 show the catch rate was just about equal, even though the hatchery run was over 10 times larger than the wild.

While Olson believes “the jury is still out” on whether hatchery fish negatively impact wild fish, the scientific evidence is very clear. Extensive studies done by the Oregon Department of Fish and Wildlife on a number of major rivers and other studies also done in Oregon (Alsea) and Washington (Kalama) by Chilcote and Leider among others, show that wild fish are much more efficient in producing offspring (wild fish have more than a 10-fold advantage over hatchery fish). Chilcote reported that 72% of the variation in productivity of a natural spawning population can be explained by the percent of hatchery fish in that spawning population. Another study by the National Marine Fisheries Service on the impacts of Fall Creek hatchery coho within the Alsea River, found that the hatchery stock was contributing to the decline of the natural Alsea coho. Additionally, in the mid-1980s when the Oregon Department of Fish and Wildlife attempted to boost the population of wild coho in coastal streams by releasing hatchery coho, just the opposite happened. The numbers of adult spawners failed to increase in the stocked streams and the number of juveniles in the next generation declined 46%. These studies and many more like them contain important information for serious anglers. We need to develop ways to keep hatchery fish from spawning in the wild or at least to keep their spawning abundance to 10% or less of the total spawning population. Anglers should keep all hatchery fish within their limit (on some rivers like the Deschutes, as many as 57% of the hatchery fish are released) and they should release all wild fish to keep the percentage of wild spawners as high as possible.

Olson believes too that the “hatchery breeding of former wild stock in a relatively short time span could somehow materially weaken the species seems a stretch.” Well, the scientific evidence suggests that it is not by any means “a stretch.” A study on the Deschutes in 1977 showed clearly that the hatchery fish from wild native Deschutes stock reared in a hatchery began to lose “survivability” in only two generations. They also found that crosses between hatchery and wild fish actually reduced offspring compared to wild crosses. In a more recent study in 1996, Reisenbichler from the U.S. Geological Survey, found that the survival rate for hatchery fish from egg to adult was reduced about 25% after one generation and as much as 85% after six generations.

Olson also questions the genetic makeup of wild fish versus hatchery fish. Here, the scientific evidence is overwhelming and quite conclusive in favor of the genetic diversity of wild populations. In fact, it has been the genetic differences within the DNA of thousands of wild stocks, or races, that have allowed them to survive millennia in Northwest waters despite floods, earthquakes, droughts, volcanoes, and ocean conditions. On the other hand, hatchery fish are produced with eggs that represent only a fraction of the gene pool of their wild ancestors which makes them very vulnerable to disease and eradication by a cataclysmic event often translating to a “boom or bust” scenario. And, as one biologist suggested, relying on such a narrow genetic base is equivalent to “putting all your eggs in one basket.” This point was forcibly made by the National Academy of Sciences and their National Research Council in a 1996 report where they unequivocally linked the survival of anadromous fish to genetic diversity. It is this genetic diversity that controls the fish’s migration routes, spawning times, growth rates, distribution throughout a particular watershed, and adaptability. All crucial to survival in an ever changing environment.

There are several other important differences between wild fish and hatchery fish such as the size of wild fish and their increased productivity, the nuances of surviving in each unique watershed, and the importance of repeat spawners, but I wanted to address specifically the points raised by Olson.

The WSC believes a healthy wild fish population can support a significant sport fishery (look at Montana, Alaska, and British Columbia for example) and we do not want to risk the future of our steelhead and salmon on hatcheries. Accordingly, we suggest that a good start is to stop killing wild fish and to use hatcheries and hatchery fish in ways that will not harm wild steelhead, salmon, and sea-run cutthroat populations. To this end, the WSC fought hard last year to get the Washington Department of Fish and Wildlife to restrict the allowable harvest of wild steelhead from 2 per day and 30 per year to 1 per day and 5 per year on several rivers. And, we wholeheartedly agree with Frank Amato who said in the same issue as Olson's "Guest Editorial" that, "In this day and age only thoughtless anglers kill wild steelhead."

For a copy of the WSC's 87-page report on the "Biological and Economic Benefits of Wild Steelhead," a list of references cited in this article, or to find out more about our "Steelhead Summit" scheduled for November 23, 2002, please write to the WSC at 218 Main St., Box 264, Kirkland, WA 98033. You can also visit our website at www.wildsteelheadcoalition.com to find out more about our organization, our goals and objectives, our membership, and our mission.

Sincerely, Jack Berryman, WSC Board President



Jim Tuggle & Dick Burge @ Oct. Meeting

photo by R. Petzold

The stock market, El Niño, and wild steelhead: a few words on long-term success in this unpredictable world.

By Nate Mantua, VP of Science and Education

Most steelhead anglers track river flows like Wall Street brokers track the New York Stock Exchange. While the bear market has shown at least feeble signs of recovery, our rivers remain at or near record low levels. Optimal fishing conditions, those brief episodes of rising and falling water, have been few and far between for months. If history provides a useful guide to the future, we can take some solace in the fact that in this rain-soaked corner of the world these parched conditions can't last much longer. Or can they?

Unfortunately, there seems to be more bad news in climate for the next few months. For most of this year ocean temperatures along the equator have been warming above and beyond their usual levels. In June the National Oceanographic and Atmospheric Administration (NOAA) declared that El Niño was back, and likely to stick around through this winter and into next spring. Although northwest steelhead never swim within thousands of miles of the equatorial ocean, history shows that El Niño often has a substantial influence on North Pacific storm tracks. Steelhead country from Oregon north to southern British Columbia usually gets mild and dry fall and winter weather, light snow packs and abnormally warm coastal ocean temperatures. Warm ocean temperatures generally favor an influx of warm-water (subtropical and/or oceanic) communities of plankton and fish into our more typically cool coastal ocean. For many northwest salmonids this warm-water suite of changes appears to be detrimental for ocean growth and survival.

How these climatic swings impact individual northwest steelhead stocks is largely a mystery. Many wild (and hatchery) summer steelhead populations in the upper Columbia and Snake River basins appear to have experienced very poor productivity during the mostly warm ocean/low stream flow years of the early 1990's, yet much improved productivity during a period of mostly abundant stream flow (1995-2002) and cooler ocean temperatures (1999-2002). In contrast, many wild winter steelhead populations from the Georgia Strait and Puget Sound have shown dismal productivity for most of the last decade in spite of a wide range of stream and ocean conditions.

Does this variety of environmental sensitivities shown by northwest steelhead stocks make sense? It is obvious that different stocks use different stream habitats, and each stream has unique attributes and sensitivities to things like drought or high flows. The ocean, like the land, contains a wide variety of habitat at any given time. It seems quite likely (to me at least) that different steelhead stocks experience different ocean conditions by being in different places at the same time.

And the good news? Honestly, there is some good news to share. El Niño is natural, it has been an important part of Pacific climate for centuries (at least), and it typically fades away in spring or early summer. Northwest steelhead have

experienced changing stream and ocean conditions for hundreds of generations. Yet if climate changes are important for steelhead, and they are always changing, how have our many stocks succeeded with such a history of environmental uncertainty?

For one short answer, we might listen to what Wall Street advisors have been preaching this past year: *"Spread your risk in today's uncertain economic climate by diversifying investments."* Probably a better source of wisdom is Jim Lichatowich's book *Salmon Without Rivers*, where he makes a compelling case that salmonids have been successful in the face of huge habitat changes and uncertainty through geologic time because they have evolved diverse populations and life history behaviors that keep them from "putting all their eggs in one basket". So rather than curse El Niño and the lack of rain, now is a great time to invest in our steelhead future by restoring those baskets that are degraded, and protect those that remain healthy.



Wild BC Steelhead

photo by Bob Ball

News & Bits-
What's going on in & around the WSC

WSC Action/Business Plan

The WSC 2002-2003 Action/Business Plan has been published on the website. If you would like to volunteer to help out on any of the activities in the Action Plan or If you would like a hard copy contact Rich Simms @ 425-880-4254 or email at wscmembership@yahoo.com.

NF Skykomish Wilderness Plan

The WSC has sent a letter of support to Wild Washington and Congresswoman Jennifer Dunn regarding the NF Skykomish Wilderness Plan. Special Thanks to WSC Member Steve Wrye who volunteered to research and write the letters of support to the NF Skykomish Wilderness Plan. Check out the website for details on how you can support protection for this important piece of wild steelhead habitat.

WSC Region 3 Area Representative

The BOD elected member Steve Worley at the September BOD meeting as the WSC Region 3 Area Representative. Steve lives in Ellensburg, WA. where he owns and operates Worleybugger Fly Shop. Steve is already at work, having volunteered to gather info for the WSC from the Region 3 biologist regarding wild steelhead escapement levels from the Yakima, Klickitat and Wenatchee Rivers. Please welcome Steve Worley as our new Area Rep.

WSC Board Position

The WSC is currently looking for a replacement for the VP of Fundraising board position. If you're a current member here is your chance to serve the WSC and work with inspired group board members. If interested and feel you can add value to the WSC mission contact Jack Berryman @ 425-821-1774 or Rich Simms @ 425-880-4254

WSC Presentation

The presentation for the WSC has been updated and is available for presentations at club meetings or organizations If you are a member of another club or organization and would interested in a presentation please contact Jack Berryman @ 425-821-1774 or email wscmembership@yahoo.com

WSC Membership Report

The WSC would like to welcome the new members who have recently joined the WSC:

Robert Elam, Member, Seattle, WA

Jennifer Senkler, Member, Seattle, WA

Special thanks to **Evergreen Fly Anglers** of Montlake Terrace, WA for their recent \$ 300 donation to the WSC

Special thanks to **Amato Publications** for the book donations to the WSC

Did You Know....

If you have corporate giving programs where you work that you can designate funds to the WSC.

Meeting Announcement

First Wednesday of the month (Nov.6) 6:30 - 9:30

Bothell American Legion Hall 19213 Bothell Way NE (Hwy 527)

November Program/Guest Speaker: **Bill McMillan**

Presentation Title: **Hatchery Impacts on Wild Steelhead Populations**

Fisheries managers have tried to use timing to prevent wild fish populations and hatchery populations from spawning together and/or using wild fish as brood stock to maintain wild genes. According to our speaker, both approaches have negative impact on wild fish populations. Bill emphasizes wild steelhead restoration by eliminating hatchery releases.

Bill started fishing at age 12, and after some fisheries studies at UW, he decided that he could be more effective with his activism from outside the system. Fish became a primary means for data collection. In 1983 he initiated the first snorkel surveys to document declining wild fish numbers. He managed a research camp on the Kamchatka Peninsula during joint Russian/American research expeditions. Bill is currently very active in many Washington conservation activities. There will be a question and answer period will follow as well as general business of the WSC and a **raffle** for some fine items.

Feel free to show up at 6:30 PM to meet some of the WSC Members and hear about how the WSC is working to preserve the legacy of wild steelhead!

For more information contact Rich Simms at www.wscmembership@yahoo.com or phone 425-880-4254. Also visit our website at www.wildsteelheadcoalition.com for information regarding the WSC.

A special thanks to Frank Amato, Kent Alger @ Three Rivers Marina Tackle and Nathan McKean @ Avid Angler for the donations to our November 6 raffle!

Wild Steelhead Coalition Board Meeting Minutes October 22, 2002

The meeting started slightly after 6:00 P.M. at the Edmonds Public Library. In attendance were board members Jack Berryman, Nate Mantua, Rich Simms, Dee Norton, Dick Burge, Todd Ripley, and Richard Hunt. Don Peterson was away on business and Dave Bailey was an invited guest.

First order of business by Jack was whether or not the WSC should spring for rooms [special deal in Bellevue through Jacks daughter] for Dick Burge and Dave Bailey [for the evening before the Steelhead Summit] as they live on the other side of the big pond and are spearheading the Steelhead Summit. Motion was moved, seconded, and passed.

Dave, Dick, and Jack met with Lou Gellerman [Steelhead Summit facilitator] and together they worked out a timeline for the day of the summit.

Dave said so far he has received word from about 25 different organizations and clubs that will attend the Steelhead Summit with more expected. We should have attendees from Northern California to British Columbia. Hopefully the winds of change are moving.

Jack thanked Dave and Dick for all the effort and time they have donated to the Steelhead Summit.

Nate Mantua has agreed to be the lunchtime speaker.

Dick gave a report on the Steelhead Advisory Committee and the proposed rule change for no yearly limit on steelhead. We discussed pros and cons and did not come to a consensus. Dick will write up a draft proposal where we stand on the issue and route to the board and trustees for feedback to develop a stance to share.

Nate talked about the speakers for upcoming programs: November is Bill McMillan, December is Jennifer McLean, and January is still open.

The Hatchery Reform Committee is starting to work on the Wild Steelhead Coalition's official stance on hatcheries. The committee consists of Nate Mantua, Jim Starkes, Carl Ostberg, Dick Burge, and Jacob Venard.

Rich stated we had received a contribution from The Northwest Fly Anglers and membership continues to grow.

The web site continues to look better and Rich and Don are learning how to do the updates and working with Juro on more and improved content.

Jack is making plans to get in touch with the Trustee's to see who would like to continue on in that capacity. We also talked some about how to involve the Trustee's a little more.

We received a letter of concern from the Wild Salmon Center [WSC] about the use WSC by the Wild Steelhead Coalition and how the use of WSC by our organization might be confusing to somebody.

Steve Worley is on board as a regional representative [region 3]. Steve is owner of Worley Bugger Fly Shop in Ellensburg.

Jack expressed his appreciation for how Rich is the glue holding the WSC together.

Respectfully Submitted,
Richard Hunt
WSC Secretary



Dances with Steelhead

photo by Bob Ball

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Air BC

photo by Bob Ball

Support Wild Steelhead!

The Wild Steelhead Coalition (WSC) is an organization dedicated to increasing the return of wild steelhead to the waters and rivers of the Pacific Northwest.

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