



State *of the*
Steelhead

*The Canary Ain't Singing Anymore,
But The Fat Lady's Just Warming Up*

By Dylan Tomine

F OUR FEET DEEP.

Rocks the size of bowling balls. Choppy on top. The big purple marabou settles into emerald-green water, comes tight and starts swinging through the seam. I hold my breath and make a small inside mend. The fly slows briefly, swims crosscurrent into the soft water and suddenly stops. The rod bends. The line pulls. And the surface explodes.

As my reel handle blurs, we hear the hiss of flyline shearing water and watch in amazement as the biggest steelhead we've ever seen shatters the surface and cartwheels away three, four, five times. When I come to my senses, there's only one thing to do: start running.

Twenty minutes later, heart pounding and sweaty, I'm holding the tiring fish on a tight line as he slips downstream into a chute of fast water. Unable to follow any further, I clamp down on the spool and my fishing buddy leaps in chest deep, plunges his arms into the icy water and heroically comes up with an enormous slab of chrome. At 40.5 by 23 inches, it's quite probably the largest steelhead I will ever land, and one of five we've hooked this morning in the same run.

The Dean? Russia? Some other exotic destination? Or maybe a complete steelhead fantasy? Hell no. This was the suburban Skykomish River, forty minutes from downtown Seattle on March 14th, 1997. That year, in the March/April catch and release season, I averaged 1.7 steelhead per trip. On flies. Fishing mostly in short, three or four hour sessions before or after work. And I'm not even very good. Unbelievable fishing, and even more unbelievable, it was just eleven years ago. Ah, the good old days.



Today, the fabulous March and April fishery on my beloved Sky is gone. The wild steelhead population in such a downward spiral that even the low-impact catch and release season was completely shut down after the 2000 season. Heartbreaking? I can't even find words for how I feel about it. I moved to Seattle in 1993 to be closer to the fabled steelhead waters of Puget Sound. A city where I could work, and a great river with big fish, less than an hour away—it seemed too good to be true. Of course, it was. I had planned on a lifetime of learning and fishing the Skykomish. Instead, I arrived just in time to witness the beginning of the end.

Who Cares?

Okay, so that's one river among hundreds of steelhead watersheds on the West Coast, right? What's the big deal? There are still plenty of fish to catch in other places, aren't there? And hey, if you aren't a steelheader, why should you get worked up about some river closing way out in Washington? Good questions all.

I would start with the fish themselves. Perfectly evolved

to thrive in both marine and freshwater environments, wild steelhead carry the ocean's bounty inland as they migrate toward the places of their birth. And, as each watershed provides a different set of spawning and rearing conditions, it creates a unique race of steelhead. In the wild realm, there is no generic steelhead, only a range of fish with characteristics adapted to their specific rivers.

As anglers, we find ourselves seeking the small, free-rising "A-Run" steelhead of the high-desert Columbia Basin rivers; the "half-pounders" of Northern California and Southern Oregon; the heavy bodied Olympic Peninsula rain forest and coastal Oregon winter fish; the mind-blowingly powerful August steelhead above the falls on the Dean; the legendary Skeena giants; the high-latitude chromers of Kamchatka and the Aleutians...

These fish range from fourteen inches to thirty pounds, from two to nine or more years old, from heavily spotted to nearly unmarked. And yet, they share several distinctive traits: A willingness to come to the swung fly. The speed and strength normally associated with saltwater fish. An individual beauty that haunts those who fish for them.



Photo Jeff Bright

And unfortunately, a future as cloudy as a glacial river after five days of warm rain.

Why should we care? If you're a steelheader, the reasons are obvious. If you are not, the depleted state of wild steelhead populations coast wide serves as a powerful example of a valuable resource squandered and a lesson for anglers and fish managers everywhere. On a bigger scale, steelhead are an indicator species, the proverbial canary in the coalmine of population growth and human consumption. In other words, the health of wild steelhead is a direct reflection of the health of both our watersheds and marine environments. Steelhead can clearly survive without us—the question is, can we survive without them?

The Crumbs of Puget Sound

The very idea that steelhead are difficult to catch—the fish of a thousand casts—is a myth. Steelhead are actually very easy to catch. They aggressively take a variety of baits, lures and flies. The problem is, there just aren't very many of them. Back on the Skykomish, the eight years I fished it regularly, from 1993 to 2000, the average run size for the entire Snohomish system (Skykomish/Snoqualmie/Pilchuck Rivers and their tributaries) was around 8,000 fish. Spread out over several hundred miles of streams, that's not many. (Compare that to the 3,000 trout *per mile* on the Madison, and it's amazing we caught anything at all.) But it was enough to provide challenging yet rewarding fishing, and, according to the Washington Department of Fish and Wildlife, enough to constitute a sustainable population. A look at some historical numbers, however, shows that this number did not, in fact, sustain itself, and furthermore, we were fishing for crumbs.

It is estimated that Puget Sound wild winter steelhead are now at somewhere between 1.6 and 4 percent of historic run size. Just to the north of the Skykomish lies the famed Stillaguamish River, immortalized by Roderick Haig-Brown and considered by many to be

“A curious thing happens when fish stocks decline: People who aren't aware of the old levels accept the new ones as normal. Over generations, societies adjust their expectations downward to match prevailing conditions.”

KENNEDY WARNE, NATIONAL GEOGRAPHIC, APRIL, 2007



Photo Tim Pask

the birthplace of modern steelhead fly fishing. In 1895, the run of steelhead to this small, delicate stream was between 60,000 and 90,000 fish. The most recent five-year average? 593 wild steelhead. Since the closure of the Skykomish in 2001, the average return of spawning adult wild steelhead in the entire Snohomish system has been hovering around 3,000. As I said, we've been fishing for crumbs.

How did this happen? The easiest, and most correct answer is people. It's impossible to place the blame on any one specific factor, but there are plenty: Poor logging practices resulting in heavy siltation (most of the famous pools on the Stillaguamish, once boulder strewn and heavily cobbled, now lie beneath a featureless bottom of sand and mud); exponential population growth and the resulting pavement, lawn chemicals and septic waste; the industrialization of Puget Sound; sport and tribal fishing harvest managed by a philosophy of Maximum Sustainable Harvest (MSH) which fails to account for variations in ocean and stream rearing conditions; the mistaken belief that increased hatchery production could mitigate the loss of wild fish... The list goes on and on, but one fact remains the same: We were fishing for crumbs ten years ago, and now even the crumbs are nearly gone.

That our governments are consciously trying to relieve themselves of the steelhead burden may ring of conspiracy theory, but the record speaks for itself. From the Bush administration's ridiculously off-base attempts (recently rejected in court) to have hatchery-produced steelhead count as part of the overall wild steelhead populations to the Canadian Department of Fisheries and Ocean's (DFO) refusal to reduce commercial gillnet

fisheries in light of a disastrously low early return of Skeena steelhead, we have witnessed repeated actions that lend credence to the theory.

Skeena 2007: The Song Remains The Same

The Skeena in the summer of 2007 is a prime example. The crown jewel of modern steelhead rivers, the Skeena is the mother river to legendary tributaries including the Kispiox, Babine, Bulkley, Morice, Sustut, Copper and more. In recent times, by July 23rd, there

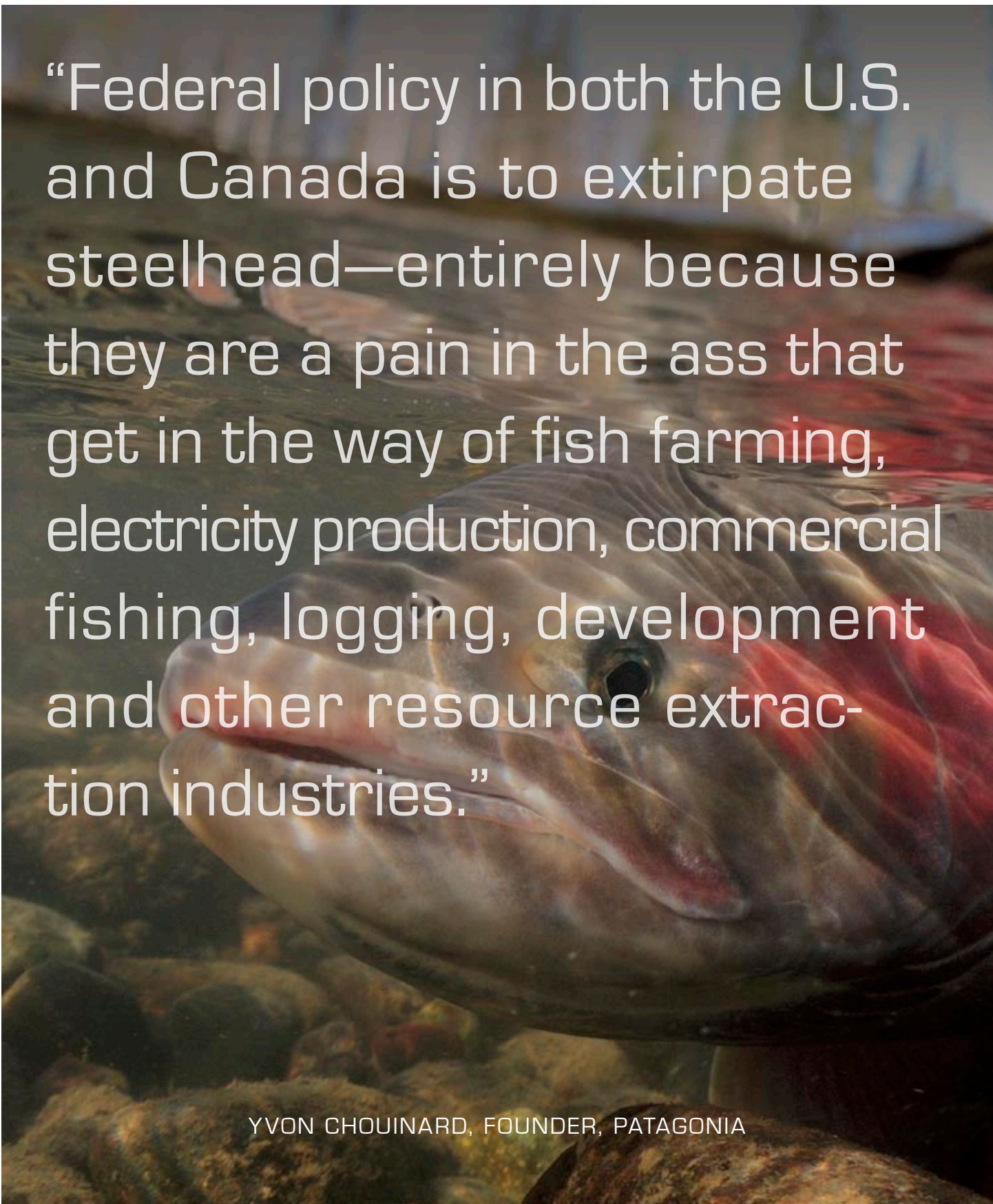
will be an average of 4,368 wild summer steelhead in the Skeena system. In 2007, the count was 642. On August 16th, the historical date for highest steelhead numbers in the Tye test fishery, exactly zero were counted.

As early as mid-July, the alarmingly low numbers created a groundswell of concern from area anglers, guides and lodges. Acting together and separately, these individuals mounted a campaign urging the DFO to

alter or cut back on the scheduled commercial salmon gillnet fisheries. This, following a year (2006) when, despite warnings from their own biologists and the BC Ministry of the Environment regarding extremely low returns of steelhead, DFO allowed an intensive salmon net fishery and the resulting by-catch of depressed early steelhead stocks. DFO's response in 2007? No action taken whatsoever.

Why is this happening again in Steelhead Paradise of all places? It's the direct result of a "surplus" crop of two to three million sockeye salmon created in the artificial, government-built spawning channels of Babine Lake. These fish, produced purely for the small (400 boats) commercial fleet's benefit, just happen to return to the Skeena at the same time as steelhead, coho and other de-

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“Federal policy in both the U.S. and Canada is to extirpate steelhead—entirely because they are a pain in the ass that get in the way of fish farming, electricity production, commercial fishing, logging, development and other resource extraction industries.”

YVON CHOUINARD, FOUNDER, PATAGONIA

“Why are we subsidizing the broken part of this fishery, the commercial gillnetting, to the detriment of the only part of this fishery, the recreational side, that makes economic sense?”

BRUCE HILL, HEADWATERS INITIATIVE

pressed Skeena stocks. The result? Lots of dead steelhead found in lethal gillnets. All this for a fishery that brings in a mere 90 cents a pound for sockeyes and about five cents a pound for pink salmon.

Will Somebody Please Do The Math? Anybody?

A recent study shows the Skeena River sport fishing industry brings more than \$30 million a year into the local economy. On the other hand, the average gross income of a British Columbia North Coast gillnetter in 2005 was \$8,000—about the value of two or three sport-



Photo Jeff Bright

caught and released wild steelhead. Exactly how many steelhead perished as by-catch to earn that \$8,000 we'll never know for sure, but it's a significantly high enough number that on the rare occasion when the nets are out of the water, steelhead escapement skyrockets. And this doesn't even take into account Skeena steelhead killed in the B.C. and Alaskan salmon seine fisheries—many observers believe the number is as high or even higher than those caught in gillnets. So, let's see...in this commercial

fishery, we have a low-income, high negative-impact industry that kills thousands of steelhead and depressed salmon stocks, while the sport fishing sector provides large amounts of income with very little impact. And yet, our decision makers can't seem to do the math.

Think that's a Canadian problem? Think again. It isn't any better in the United States. On the Columbia River, a tiny fleet of gillnetters is allowed to target hatchery spring chinook in the lower river. Unfortunately, as on the Skeena, other fish have the great misfortune to return in the same timeframe. A recent year saw more endangered winter steelhead taken as bycatch than the target species.

Even more maddening, is the cost to taxpayers to produce those hatchery spring Chinook. According to the Independent Economic Analysis Board of the Northwest Power and Conservation Council, a harvested adult spring Chinook from the Upper Columbia Basin's Entiat hatchery cost citizens \$68,031 to produce. Yes, you read that correctly: \$68,031 dollars for a single fish. (No fuzzy math or cooked stats here: The IEAB simply took the average annual operating and maintenance cost of this hatchery and divided by the average number of harvested adult fish produced there. Amazingly, this ridiculous number doesn't even take into account the cost of lost electrical production as generation is reduced to assist downstream juvenile migration or the expense of trapping, barging and trucking the juveniles around the dams.) If a typical, hatchery-produced Columbia River spring Chinook weighs 12 pounds, that fish cost you nearly \$5,700 a pound, the gill-netter probably made \$7 or \$8 a pound at the dock, and then you were offered the opportunity to pay \$17 a pound for it again at the supermarket. And at the same time, large numbers of endangered wild winter steelhead perished in the process. Great deal, huh?

California, We Hardly Knew Ye

But I digress. To keep our eyes on the ball so to speak, let's get back to the subject at hand. Farther south and not so very long ago, California was a

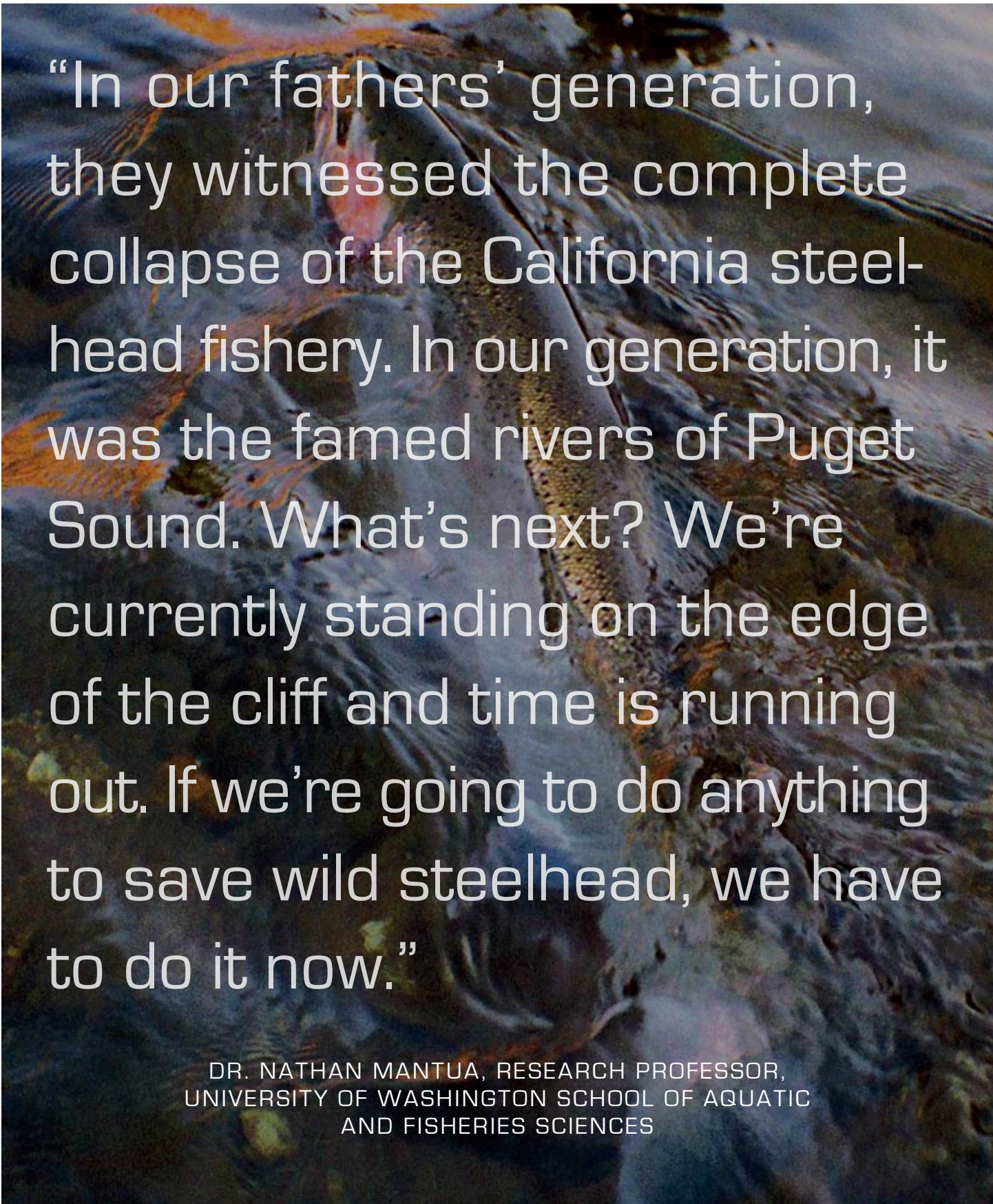
steelhead Mecca of fish-filled streams and unimaginably productive fishing. The home of early steelhead fly fishing pioneers such as Bill Schaadt and Jim Pray, coastal California was the place to be in the 1950's and 60's. Movie stars came to catch steelhead, national magazines devoted cover stories to this phenomenal fishery and the annual records were dominated by fly caught California steelhead. If you're a true glutton for punishment, read Russell Chatham's beautiful book *The Angler's Coast* and see what the good old days were really like. Keep a box of tissues nearby.

In the 1960's, the Russian River averaged 50,000 wild steelhead per year. Today, a good year sees 7,000. As agriculture, development, industrialization and other human factors have come to dominate the California landscape, the steelhead have predictably responded by disappearing. The numbers are staggering. The Carmel River, a small central coast watershed, once hosted 20,000 steelhead each year. The most recent count? 16. Sixteen fish! In 1961, the mighty Sacramento river had 40,000 spawning steelhead. Today, the annual fish count at the Red Bluff Diversion Dam averages 1,400.

California obviously has the most intense population issues on the coast, and has seen the most catastrophic losses of wild steelhead. But "management" of



Photo Jeff Bright



“In our fathers’ generation, they witnessed the complete collapse of the California steelhead fishery. In our generation, it was the famed rivers of Puget Sound. What’s next? We’re currently standing on the edge of the cliff and time is running out. If we’re going to do anything to save wild steelhead, we have to do it now.”

DR. NATHAN MANTUA, RESEARCH PROFESSOR,
UNIVERSITY OF WASHINGTON SCHOOL OF AQUATIC
AND FISHERIES SCIENCES

these precious fish would be absolutely hilarious if the results weren't so sad. Even the mass-produced hatchery fish of the American River are hardly coming back. Despite enormous numbers of juveniles released each year (which used to result in a run of up to 19,000 fish in the 1970's), returns are now less than a thousand fish. The Ventura River, which once had a run of 4,000, now gets a return of 50 fish. As concerned locals petitioned to have the remnants of this run listed under the Endangered Species Act, the feds showed up claiming a need to obtain DNA samples to determine that Ventura River steelhead were in fact a distinct species. How many do you need, they were asked. "50," was the reply. The situation deteriorated into a standoff between armed State Fish and Game officers protecting the fish from federal employees who needed to "take" fish in order to protect them. Did Mel Brooks write this script?

Oregon: Biological Warfare

In Oregon, where population and development have only recently become factors, the primary problem affecting wild steelhead seems to be genetic pollution from the massive coastal hatchery program. There are certainly logging practice issues and the resulting spawning habitat loss, as well as a long history of high sport harvest rates, but according to the National Oceanographic and Atmospheric Administration (NOAA), hatcheries are the major reason 18 of the 21 distinct Oregon Coast wild steelhead stocks are now listed as either depressed or of special concern.

Meanwhile, Back In The North Country...

So what about the "healthy" runs of the far north, where wilderness rivers attract anglers from around the world to fish over larger numbers of wild steelhead?

Well, the Situk River in Southeast Alaska, a small drainage famous for its incredibly productive steelhead fishery certainly qualifies. Compared to other, more accessible rivers, today's average run of 12,300 fish makes it a veritable bonanza for traveling anglers. However, a quick check of historical numbers shows that once again, we are fishing for crumbs. In 1952, the Situk had a typical run of between 25,000 and 30,000 wild winter steelhead. So today's "bonanza" is really less than half of what it was 60 years ago.

On the Skeena, beyond the intensive and unsustainable gillnet by-catch and indifference (or worse) from the DFO outlined above, there's currently a vast array of potentially disastrous threats to wild steelhead circling this

A pipeline carrying millions of gallons of toxic petroleum products is planned to run through the avalanche- and slide-prone Skeena corridor.

watershed. Despite the recent ban on North Coast open water net pens, industrial fish farm corporations, with their proven track record of waste pollution, chemicals and deadly sea-lice infestations (which easily spread to migrating wild fish, thereby decimating natural runs) are still fighting to place facilities near the mouth of the Skeena. (As a side note, it's a well-documented

fact that salmon farms dramatically damage wild fish runs, but has anyone noticed what a self-fulfilling market strategy this is? As wild runs decline, the value of farmed fish will certainly rise.) Royal Dutch Shell is pushing to exploit coalbed methane reserves in the Sacred Headwaters, while other corporations seek to extract molybdenum, copper and other precious metals, all of which would prove disastrous for the watershed. A pipeline carrying millions of gallons of toxic petroleum products is planned to run through the avalanche- and slide-prone Skeena corridor. Rail cars loaded with Indonesian petroleum by-products to be used as solvents rattle perilously upriver bound for the tar-sand oil fields of Alberta.

Timber companies have their sights on vast tracks of forest protecting critical spawning habitat...

That such damaging (yet profitable) industries are even on the table for what may be the most valuable steelhead watershed in the world is mind-boggling. It also demonstrates the power of the almighty dollar and what people fighting to preserve this fishery are up against. Not surprisingly, very few believe government, if left to its own devices, will make any decisions here to benefit salmon or steelhead.

Management By Extinction?

Yes, we are fishing for crumbs. Have been for some time. But while these paltry numbers may provide “acceptable” fishing, the fact is, even the crumbs of our wild steelhead runs are fast disappearing. On Washington’s remote Olympic Peninsula, a region generally considered to be one of the last strongholds of healthy wild steelhead runs in the U.S., the Quinalt, Clearwater, Sol Duc and Bogachiel rivers each receive less than 50 wild summer steelhead in a given season. In biological terms, these fish are “functionally extinct.” The Hoh River, mostly flowing through a National Park’s pristine rainforest environment, is inexplicably still managed as a catch and kill sport fishery for wild winter steelhead, with an escapement goal of 2,400 fish. I use the term “managed” loosely here. In the 2002/03 season, when a total run of 3,583 steelhead returned, the tribal and state “managers” allowed a combined sport/tribal harvest of 1,967 steelhead. In other words, more than half the run was harvested, resulting in an escapement of only 1,616 spawners—almost 800 fish short of the minimum goal. Maybe the feds don’t have the corner on that conspiracy theory.



Photo Tim Pask

When fish managers talk about Maximum Sustainable Yield (MSY) or Maximum Sustainable Harvest (MSH), what we witnessed on the Hoh is pretty much par for the course. This obviously flawed management philosophy assumes a natural surplus of fish, and places belief in



Photo Tim Pask

the idea that an agency can calculate the total number of fish, the minimum number required to sustain the run and by subtracting the two, discover how many fish are available for harvest. That might work in statistics class, but here's the problem: Nature doesn't operate according to computer models or statistics. This strategy, sadly still in place here in Washington, doesn't account for variable ocean conditions, flooding, drought or loss of habitat in rearing streams, and is frequently based on flawed escapement goals to begin with. How does anyone know it only takes 2,400 spawning steelhead to sustain the Hoh River run? They told us the 6,500 fish escapement goal on the Snohomish was sustainable and now we have less than half that number. And for that matter, does "sustain" mean at historic numbers or crumbs?

In its national assessment of wild steelhead runs, NOAA divided the remaining West Coast steelhead populations into 15 Evolutionary Significant Units, or ESUs. Guess what? 11 of those 15 ESUs are currently either listed under the Endangered Species Act or under review

for ESA listing. In Washington State alone, every one of the seven ESUs is either ESA listed, chronically under-escaped or experiencing recent and rapid population declines. And yet, according to the Washington Department of Fish and Wildlife, sport harvest of wild steelhead is perfectly acceptable on the handful of Olympic Peninsula rivers still deemed "healthy." God forbid we should let any "surplus" fish survive to spawn anywhere. In Canada, as we've touched on above, things are hardly better.

The fact is, steelhead are under attack at every level. From federal policies favoring commercial, non-sustainable fisheries, mining and forest harvest practices to bungled state management operating under a philosophy of MSH, to local municipalities' sanctioning of development and commercialization. Suburban sprawl engulf our river valleys. Forestland is cut to build houses and make toilet paper. Modern agriculture requires increasing amounts of water, while dam operators fight to generate more electricity—all at the expense of natural, fish-producing streamflow. All this, and we haven't even started to see

the effects of global warming, with its changing weather patterns, shrinking glaciers, catastrophic flood events and higher summertime stream temperatures. Is it any wonder our fish are in trouble?

It's Time

To quote Bill Murray in *Stripes*, “and then...depression set in.” I know, the numbers are staggering. The causes, seemingly insurmountable. The outlook, bleak. But there are reasons for hope, first and foremost of which is that wild steelhead are incredibly tough, resilient fish. As the glaciers retreated thousands of years ago, steelhead spread out, adapted and colonized a wide range of disparate environments from high-desert sage country to coastal rain forest, from winding tundra streams to broad valley rivers. When Mt. St. Helens erupted in 1980, sending a boiling mass of superheated ash down the Toutle River, for all intents and purposes,

the river as we knew it ceased to exist. To see it shortly after this catastrophic event was to witness a thin trickle of water winding through a wasteland of broken stumps and volcanic mud. And yet, within a few short years, the steelhead were back, re-colonizing and adapting to their harsh new environment. As Dr. Nathan Mantua says, if we just give them half a chance, the fish will respond.

So how do we give them that half a chance? Just as the threats to wild steelhead survival exist on every level, so do the possible solutions. On a broad scale, since our governments seem to respond best to money, we need to remind the people we've entrusted with the management of our fish about the financial benefits of healthy runs and the resulting tourist and sport fishing dollars. We need to fight hidden subsidies and government sanctioning of resource extraction industries. We need to vote, petition and write letters. Does it work? Absolutely. Just look at the ban on open water salmon farms for the



Photo Jeff Bright

North Coast of British Columbia mentioned above. After years of hard work by a local, grassroots coalition, the BC government finally agreed with their citizens and implemented the new policy in 2008.

When possible, we need to provide alternatives to the status quo. If we look, there are some surprisingly simple solutions to a number of the challenges we face. For example, in places like the Columbia, Fraser and Skeena Rivers, where commercial salmon gillnet fisheries intercept a high number of steelhead, live capture fish traps or a selective tangle-net fishery would allow safe release of fish from depressed stocks, while simultaneously increasing the quality (and thereby the value) of the targeted fish. Everybody wins.

We can also boycott farmed salmon and explain to restaurants and markets that serve or sell it why this product is so damaging to wild salmon and steelhead runs. Turns out, most people have no idea about the harm, and when shown the facts, will happily stop buying or selling farmed salmon.

We should encourage—no, demand—that outdoor gear manufacturers actively “give back” to preserve the resources they depend on, and support those that do with our dollars. We can eat local, organic food. Stop watering and fertilizing our lawns. Walk, pedal or paddle whenever possible. Hey, even not flushing when you pee helps.

The most valuable thing we can do, though, is to get directly involved. Of course, I understand most of us don't have the time or resources to understand all the issues or wage a personal political campaign. That's

where the organizations listed in the sidebar come into play. These groups are hard at work doing everything from political lobbying and publicizing the important issues to scientific research, stream restoration and funding steelhead-related projects. They provide the regular angler with the voice and clout of a larger organiza-

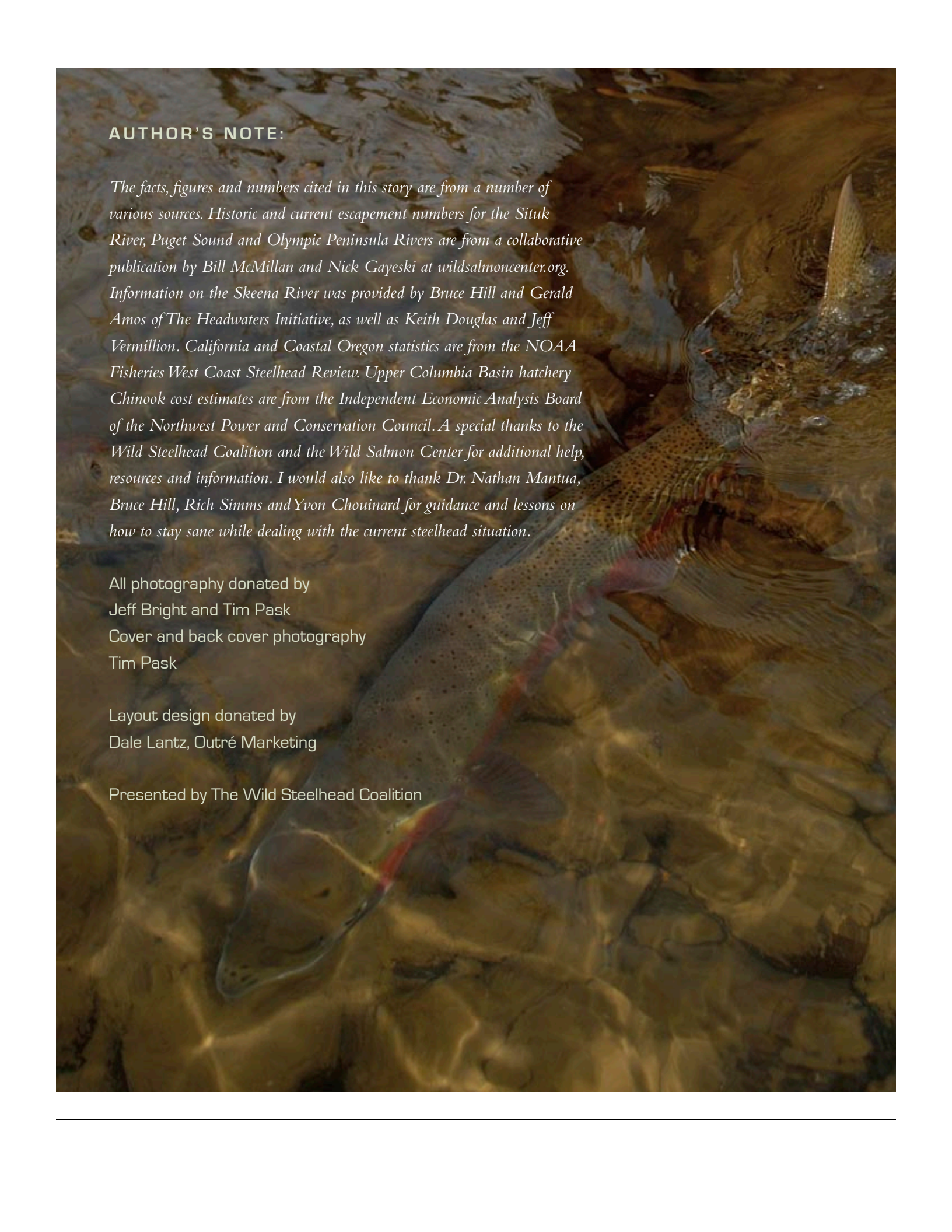
tion, and distribute information to their members about issues requiring action. As distasteful as politics and joining organizations may be to many anglers, it is now past the time where we can just go out and fish without worrying about the resource. That's pretty much what we've been doing, and look where it's gotten us.

If you fish for steelhead or dream of someday fishing for them, if the numbers and issues in this story concern you, if you'd like to believe that we'll have fishable numbers of steelhead for the rest of our lives and our children's...the answer is simple: get involved. For that matter, if you're passionate about

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trout or stripers or bass or salmon or tarpon, I urge you to learn from what's happened to our steelhead and get involved with the preservation of your fishery. As steelheaders know all too well, when it goes, it goes fast.

On my office wall is a photo of that huge Skykomish steelhead. The picture isn't old or faded—it was only taken a few years ago. But it seems like a lifetime since I last fished a spring season on the Sky. I can't even begin to tell you how much I miss it. My hope is that we can work together as concerned anglers and citizens and someday set the stage for these magnificent fish to return in truly healthy numbers. I plan to be there when they do.

A photograph of a steelhead trout swimming in a stream. The water is clear, showing the rocky bottom and some algae. A log is visible in the background, partially submerged. The lighting is natural, suggesting an outdoor setting.

AUTHOR'S NOTE:

The facts, figures and numbers cited in this story are from a number of various sources. Historic and current escapement numbers for the Situk River, Puget Sound and Olympic Peninsula Rivers are from a collaborative publication by Bill McMillan and Nick Gayeski at wildsalmoncenter.org. Information on the Skeena River was provided by Bruce Hill and Gerald Amos of The Headwaters Initiative, as well as Keith Douglas and Jeff Vermillion. California and Coastal Oregon statistics are from the NOAA Fisheries West Coast Steelhead Review. Upper Columbia Basin hatchery Chinook cost estimates are from the Independent Economic Analysis Board of the Northwest Power and Conservation Council. A special thanks to the Wild Steelhead Coalition and the Wild Salmon Center for additional help, resources and information. I would also like to thank Dr. Nathan Mantua, Bruce Hill, Rich Simms and Yvon Chouinard for guidance and lessons on how to stay sane while dealing with the current steelhead situation.

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