

**John (Jack) R. Venrick**

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**From:** "John (Jack) R. Venrick" <jacksranch@skynetbb.com>  
**To:** "AJack R. Venrick" <jacksranch@skynetbb.com>  
**Sent:** Tuesday, July 20, 2010 4:11 PM  
**Attach:** Humans Without Resources 5.doc; Humans without Resources1.doc; Humans Without Resources2.doc; Humans without Resources3.doc; Humans without Resources 4.doc; Fish Baloney - Letter to Washington Post.eml  
**Subject:** Longing for a return to 1850s salmon populations makes about as much sense as longing for a return of the Gold Rush.(No Background)

----- Original Message -----

**From:** Jack Venrick  
**Sent:** Tuesday, July 03, 2007 11:42 PM  
**Subject:** Longing for a return to 1850s salmon populations makes about as much sense as longing for a return of the Gold Rush.

To: Property Owners Who Can Smell Something Fishy When Government Steps into our water and onto our land  
bcc: Government, Media & Environmental Extremists Who Pollute Our Freedoms With Green Agenda "Science"

The following 6 authors I consider to be about as close to the following list of selfless attributes as one can get. Rare traits to find now-a-days.

- independent,
- unbiased,
- no government funded agenda,
- no government academia agenda,
- no environmental extremist agenda,
- no tribal agenda,
- no drive-by dying media agenda
- no "give me more grant money" agenda
- no UN "give me" your sovereignty agenda
- no political party agenda

I especially want to thank Rodney McFarland for giving permission to forward his excellent 5 Part series from "It's Not About Fish - A collection of articles from "The Naked Fish". This book is privately published by the May Valley Environmental Council in 2002. Some of the articles may be found in the "Naked Fish" archives at [www.proprights.org](http://www.proprights.org)

Although these articles are old news, many property owners and freedom lovers are coming on board the freedom train and are starting to connect more dots of taking by green government including big fish taking stories. Anything the government and its mobs of lobbyist touch is instantly spoiled. Generations of freedom and liberty are taken when agenda science commonly called "best available science" is sprinkled over the maddening mobs and crowds like holy water.

What big government and environmental mobs don't tell you is....

- "best available science" is not independent,
- nor is it a consensus by any stretch of the imagination.
- It is often a positive feedback loop corroborating only like minded green government groups.
- Think of it as only best for the green taking agenda
- Think of it as only best for them to get matching grants
- All of them live off this "best available science" at the expense of tax payers
- and property owners who are extorted and squeezed out of their life force and their lives, homes, land and water.
- "Best available science" agenda, does not include any other independent thinking,
- especially if it includes opposite scientific opinions and
- opposite views by the property owners whose property and water are being taken.

Jack Venrick

11/1/2010

Rural Property Owner Views  
 Exposing The Big Fish Taking Stories  
 Of Government & Green Gangs  
 Enumclaw, WA

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1. The Great Salmon Hoax - <http://www.buchal.com/hoax.html>

- An Eyewitness Account of the Collapse of Science and Law and the Triumph of Politics in Salmon Recovery by James L. Buchal
- Online <http://www.buchal.com/tgsh/chap7/Table%20of%20Contents.htm>

Fishery agency mismanagement, coupled with natural trends working against salmon, has brought Northwest salmon runs to historic lows. Charged by law to protect salmon, yet promote salmon harvest, fishery agencies do not even count how many Columbia Basin salmon are caught and killed for consumption, or measure the cost-effectiveness of salmon hatcheries.

The most basic biological facts about salmon are politicized, as fishery officials misrepresent the effects of dams on salmon to extract federal funding from the Bonneville Power Administration. The result? A \$3 billion program focused on fine-tuning fish passage at mainstream Columbia and Snake River dams that fails to recover salmon, because there is no evidence that those dams are a limiting factor in salmon recovery

Packed with hundreds of specific citations to the most recent scientific papers and reports, *The Great Salmon Hoax* is a valuable resource for anyone wanting to understand how salmon recovery efforts have gone awry, and how we can craft a rational, scientific program for salmon recovery that will bring significant numbers of salmon back to the Pacific Northwest.

The [author](#) spent six years researching salmon science and law while representing economic interests in salmon lawsuits. He presents an insider's account of the conflict that has raged since several "distinct population segments" of salmon were listed as endangered species.

2. Salmon Without Rivers

<http://www.wildsalmoncenter.org/lichatowichintro.html>  
<http://www.powells.com/cgi-bin/biblio?inkey=1-9781559633604-11>

3. Salmon At Risk [http://www.harpub.com/salmon\\_at\\_risk.htm](http://www.harpub.com/salmon_at_risk.htm)

4. Fish Baloney - See email attached above "Letter to Washington Post

5. Nature, Not Man, is Responsible for West Coast Salmon Decline - <http://www.nationalcenter.org/NPA254.html>

*"But the premise that human actions are responsible for the decline of salmon, thus justifying sweeping regulations against development, is erroneous. The NMFS's ESA listing ignores a rapidly accumulating body of scientific evidence showing that changes in the natural climatic conditions of the Pacific Northwest are largely responsible for the low numbers of salmon. Specifically, a naturally-occurring increase in the temperature of the Pacific Ocean off the coast has caused a sharp decline in salmon by destroying most of the salmon's food supply and increasing the number of fish that prey on salmon.*

*It is these ocean conditions, not man, that play the preeminent role in causing fluctuations in salmon population levels. The federal response of placing more salmon under ESA protection and imposing additional regulatory burdens on businesses and property owners in the region will do nothing to counter the adverse natural forces that harm salmon but will needlessly hurt the economy. Most importantly, the oceanic phenomenon that has been so detrimental to salmon survival operates on a 20-to-30 year cycle, and there is evidence that the ocean cycle is entering a phase that will stimulate a major rebound in the salmon population, making cumbersome government mandates unnecessary."*

6. "Humans without Resources" by Rodney McFarland - See articles below and attached, 5 Parts.

*"It is this author's opinion that we will never again see the salmon runs of the late 1800s no matter how many of our limited resources we devote to the problem. In the words of James L. Buchal,*

*"From a scientific perspective, it is entirely possible that the effect of rising water temperatures is larger than all the salmon mitigation measures that could be devised. No one has tried to figure out whether and to what extent all the efforts we undertake to recover salmon will make any difference in the face of rising temperatures.*

*"Longing for a return to 1850s salmon populations makes about as much sense as longing for a return of the Gold Rush. Trying to restore wild salmon populations to such historic levels makes no sense."*

*We spend incalculable dollars supporting the bureaucracy that has grown up to "fix" the problem of smaller "wild" salmon runs. We pay those same bureaucrats to club to death the excess runs of "hatchery" fish that manage somehow to avoid the vast fishing fleet. We force severe land use restrictions costing more incalculable dollars on everyone living anywhere near water. How long will we continue to squander resources before reassessing our goal?*

*The real goal isn't about fish; it is about money and control. As Will Hall, Snohomish County Senior Planner, explained at a meeting of the Snohomish River Forum, "There are funding opportunities – a lot of them." The bureaucrats get the money. The habitat evangelists get to control and mold our land to fit their fantasy while we pick up the bill."*

11/1/2010



## Humans without Resources

### Prologue:

It all started innocently enough. After a meal of our local endangered species, our President (MVEC's president, not George W.) called and asked if I would put together a paper on the Endangered Species Act (ESA) and how it is affecting our problems in this little valley. Moments later my editor called and asked if the little paper for Rick could be expanded to a newsletter article. I told her that I really needed to do some research so that I had my ducks, excuse me, salmon, in a row before tackling such a controversial topic. Hundreds of hours of reading later I called her back to see if she was up for editing and publishing an encyclopedia, since the books (see sidebar) had already been done by others! She declined. We compromised. If I would write using as few words as possible, not something I'm noted for, she would run a series of articles in upcoming newsletters.

The ESA is only one of at least three major forces working to drive humans from this valley. The blade started toward our neck in 1948 with the passage of the Federal Water Pollution Control Act, which after numerous amendments over the years emerged in 1977 as the Clean Water Act. The third force is the attempt to limit or direct growth in the area. Since the ESA listings are the current hot topic and have the most controversial science, they will get the most coverage.

These articles are intended to provide a perspective of the issues not usually covered in the mainstream media. I will consider them successful if you come to understand that what is presented on the nightly news or in the major newspapers as gospel is seldom the only way to look at the problems. I hope you are encouraged to delve further into the issues on your own. I will recommend reading material that is understandable by anyone and provide endnotes for those that want to get to the heart of the science. On the advice of our Basin Steward I read and recommend *Salmon Without Rivers* by Jim Lichatowich. It is well written and an easy read. Do not read it, however, without also reading something from a different perspective such as *The Great Salmon Hoax* by James L. Buchal.

### History:

Pacific salmon belong to the group of fishes known as the ray-finned fishes. Although they got a late start, evolving about 400 million years ago, they were well on their way to domination within 40 million years. There are three main groups of ray-finned fishes. Sturgeon and paddlefish are the oldest, followed by the gars. Salmon belong to the newest and most prevalent group, the teleosts, which didn't dominate western North American fresh water until about 55 million years ago. The earliest Salmonidae fossil is from a fish that swam in British Columbia 40 to 50 million years ago. Ancestors of modern salmon were lake dwellers whereas salmon are anadromous, living in salt water but spawning in fresh water. Warm ocean water is less productive than cool water. About 40 million years ago the ocean off the Pacific Northwest was 10°C (≈18°F) warmer than today. It began to cool about 25 million years ago reaching its current temperatures about 8 million years ago. As the seas cooled, their productivity increased and salmon developed anadromy to take advantage of the increased food.

While the earliest Salmonidae was settling into the sediment in a lake in British Columbia, the coastal mountains of California, Oregon and Washington lay under the Pacific Ocean. They began to take on their current form about 12 million years ago and had carved their current drainages by 2 million years ago. The modern salmon evolved from three ancestral lines around this time. One line produced rainbow trout, coho, and chinook salmon. A second line produced sockeye and a third, about 1.25 million years ago, produced pink and chum salmon.

A period of intense glaciation followed that drastically altered the climate, rivers and salmon habitat. The most recent ice age, the Wisconsin, peaked about 18,000 years ago. The Cordilleran ice sheet covered the Pacific Northwest and was 4,000 feet deep over Seattle. The salmon took refuge in watersheds to the south and north of the Cordilleran sheet.

All things considered, it was a tough time for the salmon. Jim Lichatowich says it well in *Salmon Without Rivers*, "... the genus had to survive millions of years of cataclysmic habitat disruption. For example, one consequence of active mountain building and river downcutting would have been landslides large enough to block streams or create impassable waterfalls. Mountain building would have resulted in a continuous round of habitat destruction and creation. Individual populations of salmon would have become extinct when they were cut off from their spawning habitat or when their habitat was rendered unlivable. At the same time, stray salmon would have colonized new habitats, and the process of adaptation would begin again as new populations took hold. Local extinction balanced by recolonization on an evolutionary scale has long been an important survival mechanism of the Pacific salmon." Local extinctions were common yet there were no humans, let alone European humans, here to blame!

During the Wisconsin ice age, shrinking oceans left behind a land bridge between Siberia and Alaska that was used by the first humans to reach North America some 15,000 to 13,000 years ago. The land bridge and large parts of Northwest Alaska were ice-free. By 12,000 years ago, people were radiating out into the ice-free areas of North America. The hunter/gatherer humans of that era expanded rapidly in their never-ending search for protein. Northwestern North America had an abundance of large mammals, including mammoths, mastodons, camels, horses, ground sloths, and giant beavers. These large mammals had no history of contact with humans and had no defensive behaviors to help them avoid these new predators. Because the animals had no fear, the hunting was easy even for stone-age men. The result was the widespread extinction of large mammals. North America lost 74 percent of its megafauna. The real cost of that extinction to the first Americans is outlined very well in the book *Guns, Germs, and Steel* by Jared Diamond which is a bit off this subject but is highly recommended reading.

Because the Bering land bridge was open for several thousand years, multiple migrations occurred as humans from four distinct cultures, each identified by the design of its spear points and knives, crossed from Asia to North America. The Stemmed Point and Fluted Point people hunted and foraged in Oregon and California but moved eastward 10,000 years ago in pursuit of the dwindling mammoths. The other two cultures were more closely associated with riverine (Pebble) and coastal (Micro Blade) ecosystems and eventually inhabited the Pacific Northwest. They lived in groups of 25 to 40 and moved continuously in search of food. Salmon was a small part of their diet since it was not very abundant in the unstable postglacial period and was only available during spawning. As the climate shifted from the hot, dry postglacial conditions to the cool, wet climate that prevails today, this second wave of Asian-Americans began to depend more on the increasingly abundant salmon. By the time the first European-Americans arrived en masse about 150 years ago salmon were very abundant and the descendants of the Pebble and Micro Blade cultures had developed their economy around the salmon's seasonal cycles.

Next time we will pick up with the arrival of the Europeans and their search for resources. With luck and fewer words we will find out how we got from burning rivers in the eastern US to starving salmon and flooded homes in the west with the Clean Water Act.

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## Humans without Resources: Part 2

### History continued:

The first article in this series covered the history of the Pacific Northwest from the beginning of ray-finned fishes 400 million years ago through two waves of human immigration across the Bering land bridge from Asia. [Vol 1, issue 2, The Naked Fish, June 2001]

Until approximately 8500 BC all humans were hunter-gatherers. A combination of factors at that time led to the development of food production (farming) in the Fertile Crescent area of Southwest Asia. One factor was the decline in the availability of wild foods, primarily large mammals. Many large mammals had become extinct by this time due to increasing numbers of skilled human hunters or due to climate changes. Just as the depletion of wild game made hunter-gathering less rewarding, an increased availability of domesticable wild plants made plant cultivation more rewarding. Climate changes at the end of the Pleistocene greatly expanded the area of habitat in the Fertile Crescent suitable for huge crops of wild cereals which could be harvested in a short time. The newly available wild cereals accelerated the development of the technology for collecting, processing, and storing cereals. Crop production encouraged people to stay in one place which in turn led to the domestication of certain mammals (goats, sheep, pigs, cows) so that it was not necessary to travel to hunt. Domestication of the cow allowed the invention of the plow, which significantly increased crop production. The final factor was the two-way link between food production and human population density. As the population grew there was increased pressure to find food and those who took steps toward producing it were rewarded with increased supplies. Food production tends to lead to increased population densities because it yields more edible calories per acre than does hunter-gathering. Once people began to produce more food and became sedentary, they could shorten the birth spacing and produce still more people, requiring still more food.

Farming allowed one man to feed several others, which allowed the development of other specialties. The first was probably the toolmakers (technology) which increased further the productivity of the food producers. Politicians and bureaucrats soon followed to form governments to control food production and distribute it (taxes) to the specialists. Government growth led to the need for increased land area to govern (annexation). Since not all areas agreed to annexation voluntarily, the third and fourth specialties (soldiers and weapons makers) developed and slavery was started to force the newly acquired population to continue to produce food instead of reverting to hunter-gathering and leaving. Thus farming begat technology which begat bureaucrats which begat growth. Currently farming, technology, and growth are all blamed for the ills of the planet while bureaucrats are heralded as our saviors and yet they have been in control all along. American farmers currently support 88 other Americans (including 5.9 bureaucrats and one-half soldier) while exporting large amounts of food and fiber to the rest of the world.

Meanwhile, Native Americans did not begin domesticating plants until about 2500 BC primarily because of a lack of suitable large mammals and plants. They abandoned most of their local domesticates when corn, beans, and squash from Mexico became dominant around A.D. 900. The Native Americans of the Pacific Northwest were sedentary (not nomadic) but still hunter-gatherers until recent times.

Population growth forced the people of the Fertile Crescent to expand to fill Asia and Europe. When ocean-going ships were developed, European rulers began to send explorers out in search of new land and resources. Columbus' landing in the New World in 1492 and claiming it for Spain launched a European rivalry for territory. Over the next two years, the Pope responded to the discovery and the threat of competition over it by dividing the Western Hemisphere into Spanish and Portuguese zones of influence, and assigned the Pacific Northwest to Spain. The clash between the cultures of Europe and North America was inevitable. The stone age hunter-gatherers of the Pacific Northwest were no match for the late iron age, early industrial age newcomers who had a several-thousand year head start in converting natural resources into food, tools, and other useful goods. Sheer numbers alone would have prevailed without the added technological advantages; just as in modern King County, the rural residents are being overwhelmed by the urban culture.

Spain's galleons began sailing between Mexico and the Philippines in 1527 and in 1707 the galleon San Francisco Xavier, sailing from Manila to Acapulco, shipwrecked on the Oregon coast near Nehalem beach. The Spanish sent exploratory voyages in 1774 and 1775 and performed ritual acts of possession that asserted their claim to the territory. The Spanish did not sail north seeking resources. They had their hands full extracting resources from Mexico. They wanted to reinforce their claims to the land and establish a buffer between themselves and the Russian settlements in Alaska.

The British approach was quite different. Captain Cook's third expedition of the Pacific Ocean (1776-1780) made landfall at Nootka Sound on Vancouver Island in 1778. He acquired sea otter and beaver pelts and continued up the coast to Alaska. Cook's crew was initially uninterested in the Pacific Northwest until they learned of the economic value of fur pelts to the Chinese, whereupon they hustled back to the Northwest Coast to do more trading and exploring. They sent 25 vessels between 1785 and 1794, primarily to participate in the maritime fur trade. In contrast to the Spanish, the British were on the lookout for economic resources and good harbors from the beginning and approached colonization of the territory more aggressively.

The difference in approaches led to the Nootka Sound controversy of 1789-1794 in which Spain and Britain challenged one another's claim to the Pacific Northwest. The following is excerpted from a great lesson from the Center for the Study of the Pacific Northwest. "The crisis started in 1789 when Spaniards tried to defend their claims to the territory by capturing British trading vessels as they arrived at Nootka Sound, on the West Coast of Vancouver Island. The British seized upon this incident, and talked about going to war over it, because they saw it as an opportunity to promote a different approach to colonization in the Americas. Spain should not be permitted simply to claim territory and prevent other Europeans from doing the same, the British argued, unless it was actually occupying and making use of the territory. In essence, Britain wanted to change the "rules" of colonization more to their favor. Rather than rely upon the edict of the Pope or some ritual act of possession to assert control over territory, it insisted, relatively unoccupied lands ought to be accessible to any nation that could make productive (i.e., economic) use of them. This concept of colonization was written into the Nootka Sound Convention (signed in 1790, amended in 1794), which resolved the controversy between Britain and Spain." Had the Spanish prevailed maybe this area would be part of Mexico and our environmental problems would be much worse! At least we can drink our water.

Britain sent Captain George Vancouver to implement the agreement and undertake detailed exploration of the region, which included a tour approximately 100 miles up the Columbia River as well as the first recorded non-native visit to Puget Sound.

Americans Robert Gray and John Kendrick arrived on the Northwest Coast to trade furs in 1788. Robert Gray returned in 1792 and discovered the Columbia River. From 1788 to 1794 fifteen American vessels came to trade furs. From 1794 to 1804 fifty American vessels (compared to nine British ships) came and between 1805 and 1814 forty ships arrived (compared to three British ships). In 1846 the

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Americans and British divided the region by drawing a boundary between Canada and the United States at the 49<sup>th</sup> parallel. In 1867, Russia sold Alaska to the United States. The maritime fur trade reduced the ocean mammals almost to extinction by 1900, which undoubtedly helped increase the salmon population. Any beavers in May Valley during those years were trapped and sold by the local Native Americans and did not return until 1954. They were promptly eliminated once again and did not show up until the late 1980s.

As the supply of furs diminished, more attention was focused on the possibility of exporting salmon. Captain John Dominis of Boston sailed the brig *Owyhee* into the Columbia River in 1829 and became the first American to cure and ship Pacific salmon to the East Coast. The Hudson's Bay Company dominated the fur trade and also salt cured and sold salmon in its company stores. Salted salmon suffered from a major problem. It didn't taste very good. The problem was solved by William Hume who applied a process invented in 1809 by French biochemist Nicholas Appert. Appert entered a contest to devise a way to preserve food for Napoleon Bonaparte's scurvy-ridden army and figured out the canning process. From a start of 2000 cases on the Sacramento River in 1864, the salmon canning industry exploded across the Pacific Northwest. In 1913, 2,583,463 cases were canned in Puget Sound alone. The salmon fishery had peaked by 1915 and begun its slow decline to its present level which most experts rate as 5% of the peak years. The rest of this series will explore the issues and events leading to that decline as well as proposed methods to return to those peak runs.

### Humans without Resources

#### Water:

Water is the second most important resource to humans and fish. Without it we die pretty quickly. Only lack of oxygen kills us faster. While many of us take water for granted, those with too little or those with too much tend to get focused on it in a hurry. Here in May Valley, we have too much. When it invades our homes and businesses, our septic systems or our pastures and blueberry fields, all we can think of is how to get rid of it.

What is this substance called water? Chemically, it is a compound made up of two of earth's most common elements. Two atoms of hydrogen are bonded with one atom of oxygen, thus the commonly recognized symbol H<sub>2</sub>O. Water is a very good solvent so it is rarely found as pure water. It occurs in nature with varying amounts of other substances (often salts) dissolved in it. Pure water is colorless, odorless, and tasteless. People put pure, distilled water in their iron but pay outrageous amounts for foreign water with just the right mix of minerals in it to add flavor. Most of the water on earth has so many dissolved salts in it that it is unsuitable for use except by the marine plants and animals that have adapted to the ocean environment.

There is a lot of hydrogen and oxygen so there must be a lot of water, right? Worldwide there is 326 million cubic miles of water at any given time, plus or minus a few cubic miles. A cubic mile of water is more than one trillion gallons. Your share is 58,000,000,000 (yes, that is 58 billion) gallons. You'd think there would be enough to go around.

The following table shows the actual storage areas for our water.

Water Sources	Water Volume, in cubic miles	Percent of Total Water
Oceans	317,000,000	97.2400%
Icecaps, Glaciers	7,000,000	2.1400%
Ground Water	2,000,000	0.6100%
Fresh-water Lakes	30,000	0.0090%
Inland Seas	25,000	0.0080%
Soil Moisture	16,000	0.0050%
Atmosphere	3,100	0.0010%
Rivers	300	0.0001%
Total	326,000,000	100.0000%

Water, water everywhere but not a drop to drink. Of the 326,000,000 cubic miles of water out there only 0.3% is directly usable by humans. That doesn't count floating your boat, of course. Most of the water that humans use comes from rivers which account for about one ten thousandth of one percent (0.0001%) of the available water which is why people panicked when sparks from a train started the Cuyahoga River near Cleveland on fire in June 1969. Until recent times the public waterways were considered a legitimate disposal site for industrial and municipal waste.

Congress passed the "Clean Water Act" (CWA) in 1972. CWA's goals were to return all waterways to fishable and swimmable conditions by 1983 and to eliminate discharge of all pollutants by 1985. Richard A. Halpern in an article entitled "Where Have All The Nutrients Gone?" states, "In its conception, the Clean Water Act was the child of panic. As a rational, measured act to protect the health of the environment, it was equivalent to performing bypass surgery on everyone in the country because someone in Ohio died from a heart attack."

By 1992 taxpayers and the private sector had spent \$540 billion on technologies to fix our water, broken or not, while government had spent a pathetic \$33 million on monitoring water quality. Only 36 percent of the nation's river miles are scientifically monitored. "After all this time and money," a team of USGS water quality specialists reflected recently, "it would be desirable to know whether the [Clean Water] act has worked. Is the water cleaner than it would otherwise have been and have the environmental benefits, however they may be counted, exceeded the costs?" Unfortunately, the answer is that no one knows.

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We no longer have any burning rivers but 40% of our water is still listed as unfit for swimming or fish. One major problem we have, of course, is that we have no idea how much of the water was unsafe for swimming or fishing before man began dumping "pollutants" into it. The CWA specifies arbitrary levels of substances permitted in the water that may have no logical basis. I have friends that mine gold in Alaska. They use water from a stream that passes through their claim. There are no humans or human activity upstream of them, yet the water entering their property is considered polluted by the CWA bureaucrats. In order to use the water for their mining, they must return it to the stream considerably cleaner than it was originally!

Where is the harm in that, you ask? "Clean water" is a relative term. To the chemist it is a liquid comprising H<sub>2</sub>O and nothing else. To the bottled water snob it is Perrier with its dissolved minerals (see sidebar.) To the person hiking in the woods or having a picnic in the park, it is water clear enough to see through and spot a fish or two. To the marine biologist, it is water so saline that it is toxic to the biologist. Can water be too clean?

Try this experiment. Replace the water in your aquarium with distilled water intended for your iron. Do not add any other substance for a few months and then check on your fish. Oops! Died of starvation, didn't they?

There is nothing to eat in clean water! Salmon and other fish are fairly high up on the food pyramid. The base of the pyramid consists of basic nutrients that include nitrogen, phosphorus and potassium the main ingredients in that bag of fertilizer that Bert the Salmon doesn't think you should put on your lawn. It takes large amounts of these basic nutrients to feed the simple microscopic plants that manufacture their food from sunlight and these nutrients. Simple animals, insects, etc. feed on these plants and in turn are eaten by the fish. Salmon are unique because their death after spawning helps return these nutrients to the stream. If the salmon fail to return to spawn, it starts a downward spiral of ever fewer nutrients in the stream.

In nature, nutrients come mainly from excrement and dead plants and animals. On land, those sources are easily reprocessed back into the life cycle. In the ocean, excrement and dead plants and animals drift to the bottom before decaying thus their nutrients are unavailable for use. Recovering the nutrients from deep ocean water depends on the surface water cooling to a temperature of about 43° F. At this temperature, the water column becomes unstable and some of the nutrient rich water is forced to the surface where the fish are. In winter, this occurs where the California Current crosses the Pacific (about latitude 50° north). In the late 1990's, nitrates became undetectable in the California Current. As the planet continues to warm due to the sun's increasing heat and radiation cycle the upwelling will move north causing further decrease in salmon populations here in the southern portions of their range. Without adequate amounts of these nutrients, salmon and other fish at the top of the pyramid begin to lose weight and die. From 1970 to 1995, the average weight of pacific salmon caught decreased by 25 percent. Sardines, anchovy, hake, saury, mackerel, tuna, sole, shrimp and oysters are all declining. Ocean feeding birds and whales are starving.

Most experts pay little attention to ocean conditions in salmon recovery because they think that humans can do little about those conditions. But the basic nutrients that flow down the rivers into the ocean are already in molecular form and will stay on the surface available to fuel ocean life. Billions of tons of these precious nutrients are presently being removed from our streams and rivers by the Clean Water Act, and stored where they are inaccessible to the life cycle. This splendidly illustrates the Law of Unintended Consequences at work in so much of government regulation.

Turbidity is also absolutely forbidden by the CWA. According to the CWA you (or a deer or elk) can cause excess turbidity by walking across a stream.

While walking in the stream certainly causes increased turbidity, it also stirs up the nutrients we have been talking about which encourages life in the stream. Emerging science indicates that turbidity may be an important component in the estuaries that shelter salmon smolts as they transition to the ocean. It helps to hide them from the many predators (especially birds) that await them as they leave the rivers.

Wetlands are the CWA's current filter of choice to clean up any nutrients or sedimentation that might be headed for our streams. Wetlands are religiously promoted and vigorously protected. They are actively created where none have been before to "mitigate" for the city-dweller's destruction of their own wetlands. Residents of May Valley are being flooded out by ever increasing swamps as King County and the State of Washington offer our homes and land as sacrifices to the Clean Water Act gods. It is extremely frustrating to be forced to destroy our valley because the bureaucrats in power can only see part of the problem. After years of dumping industrial waste into the water, we finally figured out that burning rivers were bad. How long will it take to figure out that starving our streams and purposely flooding our land is equally bad? And how much productive land will be needlessly sacrificed in the process?

Water is just as necessary to the plants that we eat as it is to humans and fish. Irrigation has helped make it possible for American farmers to feed us as well as create a surplus so large that we often pay them not to produce food. When disease, drought, insects or political stupidity wipes out crops in other parts of the world, we use our surpluses to bail them out. Irrigation water can be pumped directly out of the ground but, in many cases, it is easier to store the water behind a dam during the rainy season for use during the summer growing season. Storing water behind a dam also lets us use that water to generate electricity, one of the main energy sources of our modern world. Instead of burning fossil fuels that take eons to recreate and pollute the air we breathe, hydroelectric generators use the water that will be returned to us during the next rainy season.

The current controversy over dams and their effect on salmon is a large enough subject that I will cover it in its own article. For now, just ponder the impact on humans as more and more of the water that is crucial to our survival is foolishly diverted to protect the salmon fishery. Four firefighters may have died needlessly recently because they couldn't use water from a river to fight the forest fire since it is habitat for endangered species. Firefighters Tom L. Craven, 30, Karen L. Fitzpatrick, 18, Devin A Weaver, 21, and Jessica L. Johnson, 19, burned to death while cowering under protective tents near the Chewuch River, home to protected species of salmon and trout, while Forest Service personnel attempted to talk a biologist into letting them use water from the river. Twenty-five acres burned while the bureaucrats debated. I wonder if any spotted owls perished in those acres?

Water is a resource that humans must have. We have used it to our benefit from the day we set foot on this earth or before that if you are an evolutionist. Perhaps too many among us have lost sight of what is necessary for our survival in their quest to feel good about promoting other species. Our need for water increases as our population grows and the rest of the world seeks to attain the standard of living that we take for granted. The Clean Water Act's promotion of swimming and fishing, while initially well meaning, may be making things worse for the fish while denying humans our traditional uses of water and land resources. Like any other living organism, humans without resources are simply dead.

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## Humans without Resources

### The Endangered Species Act:

Buoyed by their success in passing the Clean Water Act in 1972, Congress passed the Endangered Species Act (ESA) in 1973. The actual text of the Findings, Purpose, and Policy sections of the act are reprinted in the accompanying sidebar. Note that the first listed purpose of the ESA is to conserve ecosystems, not preserve endangered species. Saving endangered species has been a ruse from the very beginning.

Section 3 (see <http://endangered.fws.gov/esa.html> for the full text of the ESA) provides a definition of endangered species: "The term 'endangered species' means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man."

Unfortunately, the ESA does not define species. Species is a word and concept that comes from taxonomy which is the science of classification. Taxonomy arranges plants and animals into natural, related groups based on some factor common to each, such as structure, embryology, or biochemistry. The basic taxa now in use are, in descending order from most inclusive:

*kingdom* - Animalia

*phylum* - Craniata

*class* - Osteichthyes

*order* - Salmoniformes

*family* - Salmonidae

*genus* - Oncorhynchus

*species* - tshawytscha – chinook

gorbuscha – pink

kisutch – coho

keta – chum

nerka – sockeye

mykiss – steelhead

clarkii – cutthroat

The species is the only taxonomic category that exists in nature. All higher categories (e.g., genus, family, and order) are purely arbitrary. Taxonomists create them. The complete definition of species is given in the endnotes. For our purposes we will use definition 4 "a naturally existing population of similar organisms that usually interbreed only among themselves, and are given a unique, latinized binomial name to distinguish them from all other creatures."

Because it is impossible to claim that *O. tshawytscha*, *O. gorbuscha*, *O. kisutch*, *O. keta*, *O. nerka*, *O. mykiss*, or *O. clarkii* are endangered or even threatened, those who wish to control their ecosystems must resort to subterfuge. They have bastardized the language of genetics (the specifics of which the average person knows little) to gain control of much of the West. The language varies from group to group but the basic argument revolves around "evolutionary significant units." They would have us believe that the fish from each stream, actually even fish in the same stream that return to spawn at different times, are so genetically different that each must be saved no matter what the cost to present and future generations. They also would have us believe that hatchery raised salmon are not only a different species but are actually harmful to the "wild" salmon because they compete for resources and somehow destroy their "genetic diversity." Thus we end up with salmon "managers" clubbing perfectly good fish when they return to spawn.

James E. Lannan, Emeritus Professor of Fisheries at Oregon State University published the following quick overview on this topic.

"The modern science of genetics originated when Gregor Mendel discovered that hereditary characteristics are determined by elementary units transmitted between generations in a uniform predictable fashion. Each such unit, which can be called a genetic unit, or gene, is a substance that must satisfy at least two essential requirements: (1) that it is inherited between generations in such fashion that each descendant has a physical copy of this material, and (2) that it provide information to its carriers in respect to structure, function, and other biological attributes.

"All members of a species are endowed with the same set of genes.

"The term allele refers to different forms of a gene. Some genes occur in two or more forms. Familiar examples of human genes that have more than one form are the genes for eye color and ABO blood type. Brown and blue eyes are alleles of a gene that determines eye color. Similarly, blood types A, B, and O are alleles of a single gene.

"At the level of individual fish, two animals are genetically different if one individual possess an allele or alleles that the other does not. Therefore, the statement, 'hatchery fish are genetically different from wild fish,' is true if and only if there is an allele or alleles that occurs only in hatchery-bred fish, and a complimentary allele or alleles that occur only in 'wild', naturally spawned fish. No such alleles are known to exist, and probably do not exist in nature. As a class, hatchery fish are not genetically different from 'wild' fish.

"Hatchery-bred fish are descended from naturally spawning 'wild' fish and possess all the genes found in 'wild' fish. There is no

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known genetic mechanism that would result in the creation of an allele found only in artificially propagated fish. Further, there is no known mechanism that would preclude the hatchery allele, if one existed, from being introduced into naturally spawning populations when fish of hatchery origin spawn naturally.

"Genetic management of naturally spawning populations is not possible, but artificially propagated populations are amenable to genetic management. The frequencies of inherited traits in hatchery populations can be adjusted to suit management goals and objectives. Establishing and maintaining hatchery populations with a prescribed pattern of life history variation similar or identical to the naturally spawning populations with which they may interbreed is an attainable management goal that could ameliorate concerns about detrimental interactions."

Dr. Lannan's master's degree is in genetics, by the way.

So the Endangered Species Act as applied to salmon really should be called the **Endangered Alleles Act**. If applied to humans, I would be in a very well protected group. I don't have an allele for brown eyes, which are very common. I don't have an allele for blue or even green eyes, which are also pretty common. I have that unusual allele for two different colored eyes and therefore must be protected at all cost, due to my genetic diversity. I might produce a child that will find a cure for cancer or be the next Einstein or maybe even save us from the habitat evangelists that are destroying May Valley. Of course, I must only mate with a female with the same allele. Since I have never met, let alone attracted, a female with two different colored eyes, it is a good thing humans are not held to salmon standards or I would have been clubbed to death as soon as I mingled with single-eye-color females.

Seriously, it is pretty ludicrous thinking when applied to humans, isn't it? And yet the "salmon experts" foist it off as gospel. While no one wants to see salmon runs go away needlessly, it is hardly the end of life as we know it and certainly not the end of any species. Perhaps helping salmon to adapt to life with humans through smarter hatchery and rearing management would be better use of all those taxpayer-funded habitat evangelists that call themselves ecologists.

But the sad truth is that the habitat evangelists have convinced the bright folks at the Environmental Protection Agency that Pacific salmon are soon to be extinct. That brings the full force of the Federal government to bear on anyone who dares stand in the way. The Feds threaten the States and the States threaten the Counties and the Counties threaten the Cities and they all decide that they will come up with a plan to save themselves. The EPA gives them a convenient out. If they have a plan in place, then no one can sue them for harming the salmon. Guess who the fall guys are? Since the rural counties and the rural areas of urban counties don't have many votes, the plan is to make us mitigate for the salmon destroyed by the urban areas. It is proof that, when pressed, the politicians and bureaucrats are smart enough to save themselves. Unfortunately, those of us in the rural areas who have always been superior stewards of our lands are forced to mold our land to some mythical "good habitat" as defined by the habitat evangelists.

In a study titled "Progeny to Parent Ratios for Columbia Basin Stream Type Chinook Salmon" Dr. William McNeil discovered that expanding populations of salmon are linked to fair and poor habitat. Dr. McNeil studied data for the last 20 years for 23 streams that feed the Columbia River. He found that the average return rate for streams with "poor" habitat (as defined by PATH) more than doubled that of "good" streams. "Fair" habitat streams more than tripled the output of "good" streams. He concluded that pristine streams are starving the fish. See Volume 1, Issue 4 of this publication for a detailed discussion of the problem with clean water. Dr. McNeil is a former Oregon State University fisheries professor and a program manager for the National Marine Fisheries Service.

The Paired River study on Vancouver Island showed identical results. The Keogh River was heavily rehabilitated and fully protected using all the latest techniques of environmental river management. The Waukwaas River was left entirely unprotected. Almost immediately, the project determined that artificial feeding of fry was required in the Keogh. The "poor habitat" of the Waukwaas River almost doubled the production of the Keogh River, even with artificial feeding.

Now you know how State Department of Fish and Wildlife biologist Larry Fisher can stand on Julianne Bruce's flooded septic system and declare it "Prime Coho Habitat!" Back when it was "bad" habitat we had lots of fish. Now that it is "prime" habitat we don't have any. But it is our fault! Right.

Isn't it wonderful that a federal law entitled the "Endangered Species Act" whose first stated purpose is to conserve habitat is being used to degrade the habitat of the very species it purports to save! Are the habitat evangelists just ignorant or are they so intent on having their way with our land that they just don't care?

Tracy Warner, citing figures provided by Ike Sugg of the Competitive Enterprise Institute, recently summarized the accomplishments of the Endangered Species Act:

"Since the law was enacted, 1,037 plants and animals have been listed for protection, and many more have been considered. Of those, the U.S. Fish and Wildlife Service has removed only 27 from the list. Seven of those species removed are extinct. Nine were removed because corrected 'data errors' showed that they were so numerous they were not threatened and should not have been listed in the first place.

"Eleven species are healthy enough for the 'recovered category', but at least four came about with the discovery of significant populations unknown at the time of the listing. Another, the American alligator, is a hardy species that many scientists agree was never endangered.

"Three other 'recovered' species are kangaroos, which are numerous and have no habitat in U.S. jurisdiction. Two others, the brown pelican and the peregrine falcon, were endangered primarily because of the effects of the pesticide DDT, which was banned the year before the Species Act was passed. The last 'recovered' species, the California gray whale, was saved by international bans on hunting and the protection of breeding waters by the Mexican government."

Not one species has been brought back from the brink of extinction by the Endangered Species Act in over twenty-five years of operation. Despite lofty

rhetoric, in practice the Act is merely a tool for promoting the habitat evangelist's agenda without regard for the magnitude of costs incurred. Once again we have the full force of government at all levels unnecessarily preventing human's use of necessary resources.

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### Sidebar

#### SEC. 2.

##### (a) FINDINGS.-The Congress finds and declares that-

- (1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;
- (2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction;
- (3) these species of fish, wildlife, and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;
- (4) the United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to-
  - (A) migratory bird treaties with Canada and Mexico;
  - (B) the Migratory and Endangered Bird Treaty with Japan;
  - (C) the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;
  - (D) the International Convention for the Northwest Atlantic Fisheries;
  - (E) the International Convention for the High Seas Fisheries of the North Pacific Ocean;
  - (F) the Convention on International Trade in Endangered Species of Wild Fauna and Flora; and
  - (G) other international agreements; and
- (5) encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.

##### (b) PURPOSES.-The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in

subsection (a) of this section.

##### (c) POLICY.-

- (1) It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.
- (2) It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.

### Humans Without Resources

#### Part 5 – The Good Old Days

When habitat evangelists proselytize about restoring our salmon runs, they envision the runs as they were from 1850 to 1900 as the goal towards which we should strive. There is no discussion of whether those were really representative populations. It may well be that the Pacific salmon populations of the last half of the 20<sup>th</sup> century were the anomaly and we are expending our life energy towards an impossible goal.

One of the first things wildlife and fisheries students were taught when I was going to school was that population densities of any species are cyclic; the population increases when conditions are good and decreases when times are tough. No species exists in a vacuum; all must share the finite resources of their ecosystem with other species including those with which they may have predator-prey relationships. Things like climate changes that may originate far away from their ecosystem also affect population densities. I grew up in the Midwest observing the legendary jackrabbit cycles which gave me first hand knowledge that what I was being taught was true. I can see how someone growing up in the city might have trouble internalizing the cyclic nature of all life. Looking out at the world through human eyes we tend to have trouble envisioning events that have cycles longer than we have been alive. Part of the wisdom that comes with age is simply the ability to grasp longer cycles. Population densities that are smoothly cyclic may still have times when they are way off the graph one way or the other. The rest of this article will look at events that may have caused salmon populations to peak well above the normal top of the cycle during the late 1800s.

#### Little Ice Age

Salmon thrive in cold water. 1850 just happens to be the end of what is commonly called the Little Ice Age which started around 1300 and followed the period called the Medieval Warm Period (800-1200) which was unusually warm. Winters during

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the Little Ice Age were as much as 2°C colder than the early twentieth-century mean. London regularly held several-week-long winter fairs on the frozen Thames, which sometimes had as much as 18 feet of ice. Even Niagra Falls was affected. The flow of water was stopped completely over both falls on March 29, 1848 due to ice in the upper river. People actually walked out and recovered artifacts from the riverbed!

James Chatters of the Pacific Northwest Laboratory and his colleagues have found that fossil remains corroborate that 6,000 to 7,000 years ago, the temperature in the Pacific Northwest was 2°C higher than at present. Analysis of archeological evidence suggests that salmon populations were 30-60% below present populations.

To put a change of 2°C in perspective, the global warming of the last 100 years has raised the temperature about 0.5°C. Baring extraordinary volcanic activity, we could easily be 300-500 years away from returning to the temperatures prevalent during the heyday of Pacific salmon. We are much more likely to experience temperatures similar to the Medieval Warm Period. We could easily see a time when all of Washington state is too warm for salmon.

The journal *Science* published an article by Dr. Bruce Finney of the University of Alaska entitled "Impacts of Climatic Change and Fishing on Pacific Salmon Abundance Over the Past 300 Years." He and his associates have been able to reconstruct salmon runs going back hundreds of years by measuring the amount of a stable isotope of nitrogen called <sup>15</sup>N in lake bottom sediment. They then correlated the rise and fall of salmon populations with climate patterns over the last 300 years. In a radio interview Dr. Finney told Arctic Science Journeys Radio, "We found that the five salmon records had similar patterns to them. That was consistent with the idea that some large-scale change in the climate of the ocean is driving the populations up and down in sync over decadal time scales... there's two features they all show that stick out. One was a period in the early 1800s where they have low values of the nitrogen isotope, which we interpret as being low salmon runs in these systems. It's a pretty strong signal. The second period that we see that's striking is the declines starting around 1950, which we again interpret as low salmon abundance." The five systems studied are all in remote areas of Alaska where the only human interaction is fishing in the ocean. They even chose areas without forests to eliminate the forest fire variable.

### **Predators**

Seals and sea lions are major predators of salmon. By 1900 the world's pinnipeds (seals, sea lions, walrus) were nearly extinct. Only about 3000 had not been turned into coats, muffs, and other apparel. After protection by the Marine Mammal Protection Act of 1972, the pinniped population is over 850,000 and increasing at 10% per year. Populations of sea lions seem to be at historic highs. In 1994, forty percent of the adult salmon showing up at Bonneville Dam had marine mammal bite scars on them.

The following is from the "Conclusions" section of a report to Congress from the National Marine Fisheries Service in February 1999 entitled "IMPACTS OF CALIFORNIA SEA LIONS AND PACIFIC HARBOR SEALS ON SALMONIDS AND WEST COAST ECOSYSTEMS."

"California sea lions and Pacific harbor seals are abundant, increasing, and widely distributed on the West Coast. Many salmonid populations, which are declining due to a host of factors, are being preyed upon by pinnipeds. This predation often occurs in areas where depressed, threatened or endangered populations of salmonids must pass to reach spawning areas as adults or the sea as smolts. Where salmonid passage conflicts have been adequately documented, such as at the Ballard Locks, there is sufficient evidence to show that pinnipeds can have a significant negative impact on a salmonid population. The Scientific Investigation Report indicates that there are a number of sites along the West Coast where there is a high potential for pinniped impacts on salmonid populations."

The modern whaling era began in 1868 with the invention of the harpoon gun and the explosive harpoon and whale populations were decimated. Whales consume some salmon but their consumption of herring, sardines, anchovies and other salmon food fish is the more important factor. Diminished whale populations provided more food for the salmon. Nowadays the whales are gone but Alaska alone shipped 41,000 tons of herring roe to the Japanese markets this year (2001).

Populations of cormorants, Caspian terns, and other fish-eating birds have increased in recent years but only recently has any effort been made to quantify the impact on salmon. Radiotagging studies by Carl Schreck of Oregon State University have discovered that cormorants and terns eat 30-40% of the smolts that make it to the mouth of the Columbia River. A single cormorant can consume up to twenty pounds of smolts in a single feeding session. In 1997, Oregon State researchers focused on the Caspian tern population on Rice Island, which was created by the U.S. Army Corp of Engineers. The population had increased 600% in 12 years. During 1997, the terns on this one island ate at least six million juvenile salmon.

Fresh water and land predator populations were also much larger before 1850. The development of the West has reduced the numbers of bears, otters, fishers, mink, blue heron, eagles, etc that prey on salmon. Humans also began programs to introduce non-native species such as shad and reed canarygrass and continue similar programs today.

In the 1980s, the Washington Department of Fisheries introduced walleye into the Columbia River above Grand Coulee Dam. Walleye have spread to the Snake River and are supporting trophy-sized fish. Walleye are voracious predators and eat juvenile salmon and sturgeon. Fishery managers are not promoting programs to exterminate walleye but instead promote the extermination of squawfish, which are native.

The rush to "restore the natural ecosystems" has produced programs to increase salmon predators. In 1997, fishery managers required BPA to fund a program "directed at learning more about the status of, and options for restoring, populations of Pacific lamprey." Research in Canada suggests that lamprey feed on juvenile salmon and cause significant mortality. Fishery managers are taxing citizens of the Pacific Northwest \$5 million a year to kill one salmon predator (squawfish), and \$334,560 to reintroduce another (the lamprey). Squawfish are politically unpopular, while politically-potent tribes cite a historic practice of harvesting lamprey.

Man, of course, has been a major predator of pacific salmon since the start of the canning industry in 1864.

### **Competition**



At the beginning of the 20<sup>th</sup> century, shad roe was a delicacy favored by eastern gourmets. Fishery managers transplanted shad to the West Coast, never stopping to consider whether the rivers were big enough for both shad and salmon. Shad were heavily overfished for many years, with harvests approaching the total run sizes. Later, fishermen (and/or the fish-consuming public) lost interest in shad and populations began to skyrocket. One scientist has compared the increase in shad populations and decrease in salmon populations from a "biomass" perspective.

"If the average American shad adult weighed four pounds in 1990, the Columbia River production was about 16 million pounds. Together with 1990 salmonid production, the Columbia River production was about 36 million pounds. There is strong inference for food competition between shad and juvenile salmonids in the Columbia River and estuary today."

From an ecological perspective, the Columbia River Basin has only finite energy resources to support fish and other aquatic life. Like a giant fish bowl, it can only hold so many fish. "When you add up the biomass from the shad population," says oceanographer Curt Ebbesmeyer, "the Columbia is producing as much fish as it did when it was full of salmon".

#### Food

Dr. Finney's research also corroborates the importance of nitrogen and phosphorous in the salmon food chain as was discussed in "Humans Without Resources" [Volume 1 Issue 4]. Because the isotopes of nitrogen are different in the ocean and salmon gain more than 99% of their mass in the ocean, it is possible to track the effect of salmon-derived nutrients (from spawned-out fish) in the pelagic zooplankton that is the primary feed of the young fish. If customary numbers of adults fail to return to the ecosystem – whether from climate changes, high predation, or other causes – the lack of carcass-derived nutrients continues the downward spiral.

If you have ever had the opportunity to follow a stream through a mature forest, you probably observed the lack of small vegetation. The large mature trees shade the ground preventing many plants from growing including the algae that grow in the water in more open areas. The lack of diversity in plants leads to a lack of diversity in the small animals that feed on those plants. Is it just coincidence that salmon populations grew to their peak as the West was first being logged or could opening up the streams to the increased light have contributed to increased food supply for the salmon? Are we sure that riparian shade is the solution to increased salmon runs?

Mature conifers (fir, spruce, cedar) draw massive amounts of water from their roots up and out through their needles via transpiration. One consequence of logging the forests was that water went to increase stream flows, thus more salmon habitat. When May Valley was all forest, upper May Creek was a part-time stream and the only salmon were in the lower Canyon. Not everything that man has done has been bad for salmon. As Roger Lowe points out in his *Alternative [to the] Snohomish River Basin Near Term Action Agenda*, "There are several hundred more miles of river available [in the Snohomish basin] as salmon habitat than before the modifications [made by man]."

Was it coincidence that salmon flourished as cattle were introduced in most of the West? Or could that cattle by-product (high in nitrogen and phosphorous) we use to fertilize our gardens and crops have helped to feed the plants that feed the zooplankton that the salmon eat? May Valley sure had a lot of fish when Dick Colasurdo had all his dairy cows! Was it coincidence that Mr. Crapper marketed a device that Seattlites used to flush their fertilizer into Puget Sound while the salmon flourished?

#### Conclusions

It is this author's opinion that we will never again see the salmon runs of the late 1800s no matter how many of our limited resources we devote to the problem. In the words of James L. Buchal,

"From a scientific perspective, it is entirely possible that the effect of rising water temperatures is larger than all the salmon mitigation measures that could be devised. No one has tried to figure out whether and to what extent all the efforts we undertake to recover salmon will make any difference in the face of rising temperatures.

"Longing for a return to 1850s salmon populations makes about as much sense as longing for a return of the Gold Rush. Trying to restore wild salmon populations to such historic levels makes no sense."

We spend incalculable dollars supporting the bureaucracy that has grown up to "fix" the problem of smaller "wild" salmon runs. We pay those same bureaucrats to club to death the excess runs of "hatchery" fish that manage somehow to avoid the vast fishing fleet. We force severe land use restrictions costing more incalculable dollars on everyone living anywhere near water. How long will we continue to squander resources before reassessing our goal?

The real goal isn't about fish; it is about money and control. As Will Hall, Snohomish County Senior Planner, explained at a meeting of the Snohomish River Forum, "There are funding opportunities – a lot of them." The bureaucrats get the money. The habitat evangelists get to control and mold our land to fit their fantasy while we pick up the bill.