Columbia River Gillnetter

Columbia River Fishermen's Protective Union *Spring 2002 / Vol. 33, No. 1*

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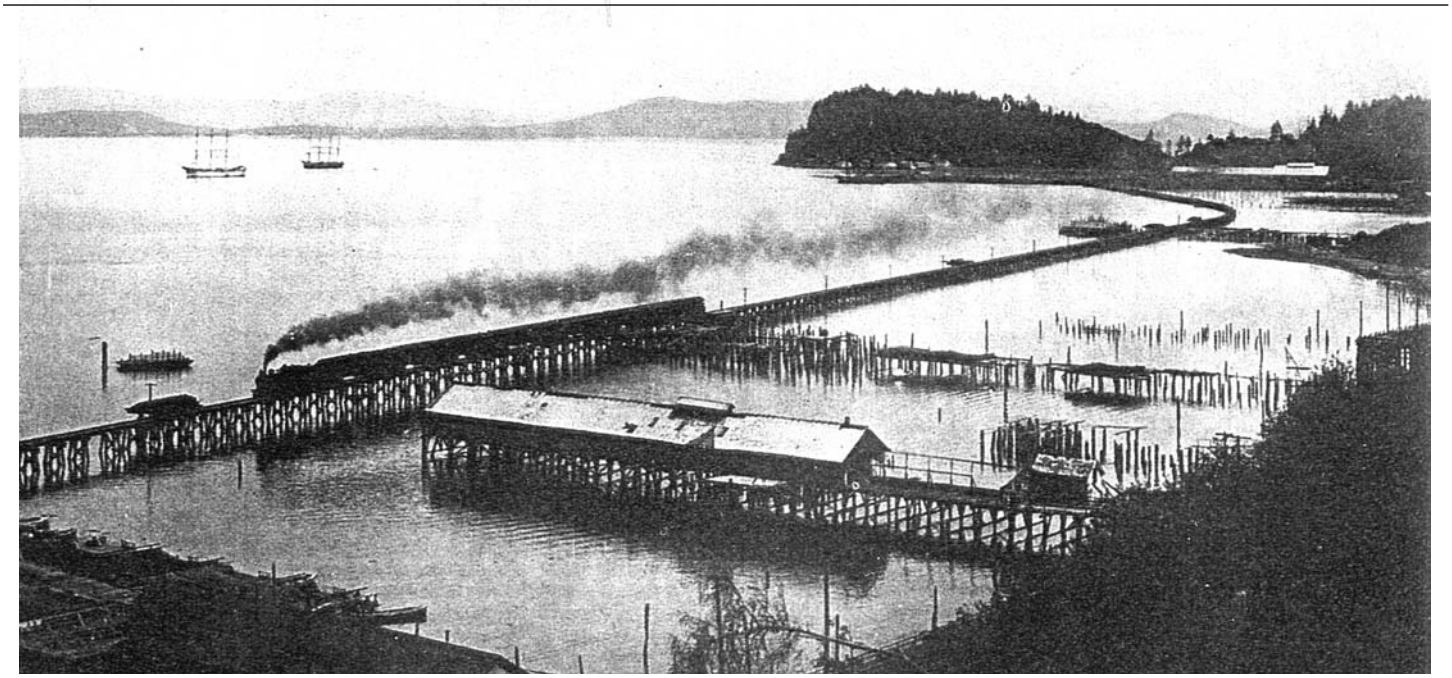

The Stream Train arriving in Astoria from Portland at the turn of the century

Sally the Salmon Says...

If farm raised salmon is organic then I'll say that I'm proud to be a wild salmon that eats natural food and swim in the broad blue ocean rather than a slack muscled weakling that's raised in a pen and fed animal by-products and growth hormones. If that's organic... I'd rather be natural and wild.

The Summer Runs are in full swing

In June 2002, Columbia River Indian Tribes were fishing the summer salmon run for the first time in 37 years. Fishing is only allowed with dip-nets.

Not many fish were biting.

Molly and Brian Renauer drove to Cascade Locks on Saturday morning expecting to buy themselves a fresh summer chinook salmon.

On Saturday morning, Wilson LaRoque, 49, a lifelong fisherman from the Yakama tribe, didn't have any chinook to sell from his impromptu fish stand under The Bridge of the Gods.

Continues from page 1

At the nearby Marine Park, Nathan Dick, 44, a fisherman from the Umatilla tribe, had yet to net a chinook.

Across the bridge on the northern banks of the Columbia at Fort Rains, Wash., Yakama fisherman Frank Sutterlict, also known as One Feather, had no chinook to sell either.

The Renauers headed home to Portland with sockeye, a red salmon.

The big chinook are tough to catch from shore, tribal fishermen said.

"They run deep," said Sutterlict, as he filleted a steelhead for a couple

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Also, join us on the web: *Discover our new web site at www.crfpu.org where, in addition to the articles of this issue, you will find more news articles like "Drag Fisheries in Crisis" and old photographs as well.*

Columbia River Gillnetter

One of the Oldest Conservation Unions on the West Coast—Since 1884

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Columbia River Fishermen's Protective Union
One of the oldest Conservation Unions on the West Coast
Incorporated in 1884
Astoria, Oregon 97103
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Foreword

This paper is being published for the express purpose of keeping the public and the fishermen informed of the **true facts** and happenings in regard to the Columbia River Fishing Industry and all people connected with it. The advertisements which appear within make it financially possible to publish this paper and we hope you will in return patronize and thank the business people who contributed to this cause. Anyone who wishes to contribute articles, pictures stories, or ads, please contact the editor at P. O. Box 511, Astoria, OR 97103 or call (503) 325-2507

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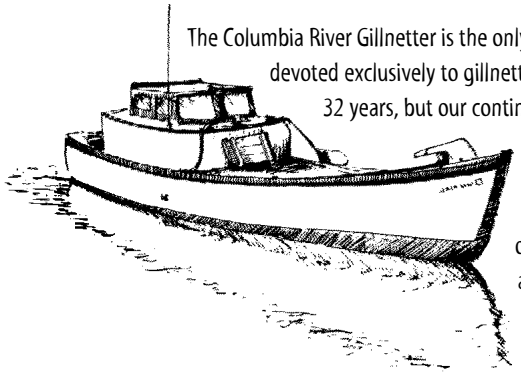

The Columbia River Gillnetter is the only remaining publication on the west coast devoted exclusively to gillnetting. We have been making a difference for 32 years, but our continued existence is threatened by increasing production and mailing costs. Now more than ever, we need a voice to represent our side of the issue, and the Gillnetter is our only contact with fishermen, lawmakers and the general public.

If you would like to help, send donations to Columbia River Gillnetter

The following individuals have made a cash contribution to the Columbia River Gillnetter Publication, which will be used to continue the publication and mailing of this free informational newsletter. We thank them for their support!

December 2001 — June 2002

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This paper was started for your benefit 32 years ago-to keep you informed and help fight the battles for you. As we are non-profit, we depend on advertizing and donations to keep publishing and mailing this newsletter. Many of you have donated generously over the years, but others haven't. If you like the work we do, I urge you to please send a small donation to help us continue. Think about it. Thank you.

Please make your contributions to: Columbia River Gillnetter, P. O. Box 511, Astoria, OR 97103

From The Editor

The year of the "Tangle-Net."

The fisheries dept. has moved along with the project. We have all worked hard to transition to "Tangle-Nets" as you will read on page 5. One of the greatest hardships imposed by the project is the cost of training and upgrading equipment. Gillnetters had to pay $500 to $1,000 to be in compliance with project requirements. Also, an elderly fisherman almost needs to have a partner along–to assist in reviving the fish–if the catch is more than one fish at a time. Out of the 600 gillnet permit holders, only about 150 were fishing this spring. Those who fished made out good–especially those who had drift-rights–because there was little competition. Below Tongue Point, the fishermen did poorly as the river is almost 6 miles wide. So the drift net fishermen made some money, but the others were lucky if they brought in enough to cover the costs of upgrading their gear for the new fishery.

While the fisheries department are clamoring the success of the program, two things stand out to me: Gillnetters were allowed to fish during March and April for the first time in a long time; the past two years have seen the largest and best spring chinook since record keeping began in 1938. Despite the exceptional fish runs, it appears that the promises made for this season have been broken and the non-tribal commercial fishery has once again been left on the shore. While tribal and recreational user groups were given expanded seasons and increased catch limits to take advantage of the record salmon run, the traditional, non-tribal commercial fishery has been virtually eliminated.

With the fish runs we've seen these past 2 years, if we had been able to use our traditional nets, all the fishermen should have been able to share in the catch and make some decent money. Seasons could have been adjusted to allow for wild fish escapements during March and April.

There have been so many fish returning these past two years, we could have caught them in baskets while all sharing the benefits.

Please feel free to share your comments with me and I will publish them in our next issue.

—Don Riswick

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JOIN YOUR UNION

In January, the CRFPU board authorized a new membership price of just $50.00/year.
A Union card will be issued to any Commercial Gillnetter. Fill out or copy the form below and send in your dues to CRFPU c/o Jack Marincovich, Executive Secretary, Rt 2 Box 67A, Astoria, OR 97103
Any fisherman who fishes in any of the net-pen fishery is urged join and attend our meetings to have a voice in our future. We need your support. Call (503) 325-2504 for more information.

I wish to become member of CRFPU

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To the Editor

TANGLE NETS & RECOVERY BOXES MIXED BLESSINGS

It is with mixed reactions that I evaluate this Springs Columbia River Commercial Salmon Fishing Season. "Gillnetters", up and down the river, became "Tanglenetters" in the harvest of some 15,000 prime Chinooks out of the large run headed up river on their way to hatcheries and spawning waters on the Main Stem, Snake, and Willamette Rivers.

With no governmental or agency financial assistance a certain percentage of the Oregon & Washington permit holding fleet put together the small mesh nets, recovery boxes, and took a special class that were required to participate in this experimental fishery, at their own expense. The tangle nets worked well, especially where there were large concentrations or movements of fish, provided a clean catch, and with the use of the recovery boxes on stunned fish there were near zero losses on designated adipose finned Wild Salmon.

With the extra handling of fish necessary and the required maximum half hour length drifts it is all but impossible to get along without a crewman to assist. It is also practically impossible to get the proper drift timing and location that, we know from generations of gillnetting experience, is so important to the catch. That on top of the fact that such a small percentage of the harvestable hatchery Salmon have been adipose fin clipped increases the effort and decreases the potential catch.

After last years debacle, in which we were allowed to catch only 5,000 or 6,000 out of a record run of Spring Salmon, it was both emotionally and financially uplifting to have the opportunity to harvest a larger number of top quality fish this year. With our commercial season coming early, in late February and March before other fisheries hit the market, we received a premium price for our catch of 3 to 5 dollars per pound. This, along with the very successful CEDC Select Area Fishery in Youngs Bay, Tongue Point, and Blind Slough, is providing a "breath of fresh air" for the fishing industry and the tower Columbia area as a whole.

As historic providers of Salmon Food Fish for the consuming public and considering the harvest sacrifices that we have made in the past, in the name of conservation, we look toward our Federal Government to make the necessary provisions in the Hydropower System to protect this valuable resource. Now we are again donating our effort to help save Endangered Specie numbers by harvest control in this Demonstration Fishery. However, it makes little sense to save 1 returning adult Salmon only to lose thousands of downstream migrating Fingerlings to the fish unfriendly dams and slack water pools of the upper river.

We are doing our share with 'tanglenets" to help bring back Columbia River Salmon Stocks, on the greatest salmon stream in the world, and we reserve the right to return to our "Gillnets" in the future.

—Jon Westerholm

TANGLE-NET FISHERY

I've been fishing on the Columbia River for over 50 years. I didn't think the gear would catch fish. I figured the tangle nets were another way for the States to push the commercial fisherman out of business. I've seen the industry cut back so far that it's hard to believe the states would be working to do something good for the gillnetters.

At the end of the season I was surprised. We fished throughout the month of March, which we haven't done for decades. Our catch was higher than it's been for years. The price for spring salmon is high and this is a way for the fleet to make a little money.

The live boxes were amazing. I took out several reporters and interested folks who just wanted to see the gear work. They were as impressed as I was. The Associated Press reporter was real fascinated by the live-box and how well it recovered fish.

I think overall the fishery worked pretty well. If this is really a way to access a larger share of hatchery fish, then I think the commercial industry should continue to support this.

—Ab Ihander-Gillnetter

NEW FISHERY

Tooth Net or Tangle Net is a new way of harvesting Spring salmon. After one year of testing with a small fleet of boats, the fishermen were told that if they wanted to continue harvesting, they would have to participate in the program.

Many fishermen, including myself, felt that the fisheries managers were moving too fast to implement the program and that not enough testing was being done.

After a number of meetings and a lot of discussion and input from both sides involved, the ground rules were laid out:

1) We are required to attend a six hour certification class, which is held in Canada.

2) The most expensive part of the program is fitting the fishing boats with the "recovery box" and water pump, designed to revive the stunned wild fish so that they can be released safely and survive.

3) We can use the same nets that we use for fall coho fishing-though they must be shorter in length and must be in and out of the water within a 45 minute time frame.

Preliminary outcomes of the program have been encouraging. Fishing began the last week of February and ran thought the end of March (this is the longest harvest period since the 1940's). We ended up harvesting 3 times more hatchery fish than the previous year, so I think that overall the program worked very well, though I can see some room for improvement in the program. For instance, we could wait till March to begin the season. Also, a larger net mesh might work better. I also hope that eventually more Spring Salmon will have their adipose fin clipped when released from the hatcheries (not all hatchery released fish are clipped), because the way things are now, it appears there are a lot of wild fish in the river-so why are they listed as endangered?

—Jack Marincovich

Locke signs Hatfield's measure sending boost to commercial fishers

Left to right: Irene Martin, Rep. Mark Doumit, Gov. Gary Locke, Rep. Brian Hatfield, Rep. Kelli Linville

OLYMPIA—"Commercial fishers should have every reasonable opportunity to sell their catch directly to consumers," state Rep. Brian Hatfield said today (April 2) after Gov. Gary Locke signed into state law Hatfield's legislation to do just that.

The Hatfield measure (House Bill 2323) gives commercial fishers "a reasonable opportunity to make a fair and legitimate profit from their catch."

Irene Martin, who with her husband, Kent Martin, lives in Skamokawa and is a commercial fisher, joined Locke and Hatfield for the bill-signing ceremony for the legislation. Irene and Kent Martin testified for the bill in a House committee.

"This new law offers an opportunity for fishermen to market their own catches," Martin explained. "We hope it will be a good tool we can use to get better, fairer prices."

Another commercial fisher from coastal Washington, Frances Clark, who lives in Chinook, also testified in support of the legislation in committee earlier this year.

Terms of the new law direct the Department of Fish & Wildlife to offer what's called a direct retail endorsement. This will provide a single license to allow someone who already has a commercial-fishing license the right to clean, dress, and sell his or her salmon or crab directly to the retail market.

Only one direct retail endorsement is necessary—even for fishers owning multiple commercial-fishing licenses. The direct retail license may not be transferred or assigned with the existing license.

Without this legislation, "it would continue to be very difficult and expensive for commercial fishers to acquire all the permits they need to sell a catch to someone other than a licensed wholesaler," Hatfield, D-Raymond, pointed out.

"The price is significantly lower than the price on the retail market. What this means is that a lot of the fishers choose not to fish if it means selling at the wholesale price."

Hatfield also noted that "more fishers selling retail will almost certainly give tourism a big boost in our communities."

"This will mean tourists spreading the word that fresh seafood is available directly from fishers in our communities—and at good prices."

The various county licenses that fishers had to get (before Hatfield's bill) have been
costly and unreasonably inconvenient to obtain. A lot of time, the necessary county offices aren't even open when the fisher can get there—and inspections aren't available on weekends (when most sales take place).
State Reps. Mark Doumit, D-Cathlamet, and Kelli Linville, D-Bellingham, were two co-sponsors for the new Washington law.

Columbia Opposition group to deepening Columbia River

June 1, 2002

Stunned!

l locked my keys in the car. It's not my usual style to be so forgetful, but I was a little flustered. National Marine Fisheries Service (NMFS) had just released their long awaited Biological Opinion on Columbia River channel deepening. The stunning conclusion: the massive project would not harm the endangered salmon of the river!

It shouldn't have been a surprise. NMFS is supposed to protect salmon and their habitat, but the agency is also caught here in a nasty squeeze by the US Army Corps of Engineers along with another army of special interest political forces. It's tough dancing in tight quarters.

What is most encouraging about the Biological Opinion is its wealth of contradictions. These should help ensure a positive outcome for the coming lawsuits. The document is filled with descriptions of how salmon will die during dredging, blasting and dumping. It anticipates short-term harassment and contamination of the already over-stressed fish. NMFS admits uncertainty about longer-term degrading of the estuary. They even declare that the deepening "will adversely affect" Essential Fish Habitat. But seeming to "hear no evil (or science, for that matter)" NMFS blesses the Corps with an agreement to let the destruction begin.

When a government project damages important habitat, offsetting "mitigation" is supposed to be arranged. No habitat mitigation is provided in this Biological Opinion. Zero. Instead a bizarre assemblage of "ecosystem restoration" projects are offered. One involves spraying herbicide on undesirable plants that have cropped up on dredge spoil islands. Another takes 800,000 dump-truck loads worth of partially contaminated sediment and fills the basin east of Tongue Point, thereby precluding aquatic development and wiping out a select fishery that returns millions per year to the local economy. Another "restoration" dump destroys historical salmon fishing grounds while providing enhanced salmon feasting opportunities for birds. My favorite is the flooding of an island, contingent on the resident Columbia white-tailed deer first being removed from both the Endangered Species Act and the island. Why is something that would take an uncertain decade even included?

NMFS has previously prescribed improvements to the estuary as crucial to offset the salmon-grinding hydropower system, but now allows a Corps project to trash that very habitat. No wonder I locked my keys in the car.

Fortunately the Columbia River channel deepening, which amazingly gets shoddier every time it rears its nasty head, will probably never occur. First, the environmental hurdles are just too high. Case in point, the states of Oregon and Washington resoundingly denied water quality permits under the Clean Water Act back in 2000. Guess what? The substance of the project hasn't changed, except for the worse. The state agencies might choose a political decision similar to NMFS, but they shouldn't have much luck in court either.

The other way the project should fail is that it makes no economic sense. The Oregonian's investigative series "Digging Deeper" clearly showed that deepening the shipping channel would not provide adequate benefits to offset its cost to the nation. New elements of the Biological Opinion that require monitoring, for example, simply skew the equation further. The Army Corps should perform the honorable and fiscally responsible act of withdrawing their plan because it cannot pass muster.

Those who care about the life of the Columbia River must not let down the guard, however. Court rulings are not always perfect solutions and the Corps may find new ways to manipulate their cost estimates. To get this to go away and finally not return will require political action. In this case the path to political power is from the bottom up, developing grassroots and local government support. This is the growing energy that has so far held the deepening at bay.

Later this summer public hearings will be held on the latest iteration of channel deepening. Citizens can share their views and learn more about what the federal government seeks to impose. If the government repeatedly hears that we want to improve the estuary, not destroy it, they might finally understand.

—Peter Huhtala, executive director of the Columbia Deepening Opposition Group

Salmon for All Board Elects A New President

In December, the Salmon for All board of directors elected a new executive committee. Gerry Westerholm of Gearhart will lead the organization in 2002 with Steve Fick as the Vice-President and Kurt Englund as the Secretary/Treasurer. Gerry succeeds Bruce Buckmaster who lead the board for the past 2 years. Gerry is the first fisherman to hold this position.

Gerry was born to a fishing family and began fishing on the Columbia River at age 11. He has fished the Columbia and in Alaska (Cook Inlet) for the past 50 years. He has been a member of Salmon for All since 1964 and served as the Vice-President for the past five years. Gerry is also an active member of the CRFPU, UCIDA and UFA. In addition to fishing, Gerry has had a distinguished career as an educator in the Seaside School district.

Gerry is eager to hear from fishermen and processors about their concerns for the health of the Columbia River and the commercial salmon industry.

Please call Salmon for All at (503) 325-3831 to reach Gerry.

Salmon for All 2002 Board of Directors

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Steve Fick, Fishhawk Fisheries
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P.O. Box56 Astoria, OR 97103
(503) 325-3831 Voice (503) 325-2725 Fax
Web Site: www.salmonforall.org
E-mail: salforal@pacifier.com

Salmon restoration grants

The Washington State Salmon Recovery Board approved 147 projects totaling 31.8 million dollars in February. Of these Columbia Land Trust received 1.4 million dollars for three different projects.

Grays River—Phase II

Building on the acquisition of 116-acres on Grays River last year, Columbia Land Trust and Ducks Unlimited will conserve and restore an additional 527 acres of the Grays River estuary. This project will conserve some of the last remaining mature spruce wetland in the Columbia River estuary, and restore over 325 acres of diked wetland and floodplain to benefit salmon and watershed function The Grays River estuary is identified as one of the most important resources for salmonid recovery.

Tugboat captain cited for striking boat with barge

A tugboat captain was cited for failure to keep a proper lookout after a barge he was towing allegedly struck a 19-foot boat near Vancouver, Wash., on Saturday, dumping two fishermen into the Columbia River, the Multnomah County Sheriff's Office said.

Both men were rescued by Oregon State Police. Leon Grant, 48, of Portland was treated for a leg injury and hypothermia at Providence Medical Center and released. Ken Dodson, 43, of Milwaukie was not hospitalized.

Lt. Brett Elliott of the Multnomah County sheriffs office identified the tugboat as the Sterling V, operated out of southern California, pulling the 122-foot fuel barge, Energizer.

He said the captain, Ray Griffin, is also from Southern California.

Elliott said there may have been fault on both sides, and the operator of the small boat may also be cited for anchoring in the channel and failure to maintain a proper lookout.

The tugboat did not stop after striking the smaller boat, anchored on the north side of the Columbia River off Kelly Point Park. Elliott said marine deputies located the barge Sunday near Rainier.

He said the captain was not cited for hit and run after the investigation determined that the tug, which was headed downriver into the channel after coming out of the Port of Vancouver, would have been in a side tow and the captain and his crew of four did not see the smaller boat. —R. Gregory Nokes

Don Riswick, Editor of the Columbia River Gillnetter Publication talks with Ted Kulongoski, a winner of the nomination for governor by the Democratic party of Oregon. Kulongoski recently met with the Gillnetters and other interested parties at the Port of Astoria to share views on Dredging the Columbia, Dams and other pressing issues.

-Aquaculture's Troubled Harvest-

By Bruce Barcot

Raising salmon in ocean pens was supposed to preserve the wild and feed the world. But all over the globe, industrial-style fish farming is threatening native fish and the ecosystems that depend on them.The latest battleground: British Columbia.

Most folks welcomed the salmon farms when they came to the Broughton Archipelago 14 years ago. The people who live in these remote Canadian islands 250 miles north of Vancouver thought they were getting an eco-friendly industry that would ease the pressure on the region's dwindling wild salmon runs. "I figured they'd offer people jobs, attract new families, and keep our community alive," recalls whale researcher Alexandra Morton.

It's easy to see what had attracted the farmers. The archipelago, a puzzle of islands scattered through hundreds of miles of fjords, remains one of the richest pockets of biodiversity on the North American coast. Forests choked with second-growth cedar, hemlock, and Douglas fir grow straight down to the high-tide line. Cold, green salt water—storm-sheltered and teeming with nutrients stirred by the tidal flush—nurtures five species of wild salmon, which in turn support a dazzling cast of creatures: dolphins, porpoises, seals, sea lions, great blue herons, and one of the world's largest populations of killer whales. Bald eagles are as common as gulls. Barnacles grow as big as a lumberjack's thumb.

At first, the farmers trod lightly, consulting with local fishermen to find sites that wouldn't harm wild salmon runs. But a few years after the farms arrived, things began going wrong. Big corporations bought out smaller operators; the farms metastasized and anchored their net pens in places where wild salmon smolts rested and fed on their way out to sea. Shrimp fishermen began pulling up traps full of farm muck, a gooey black mixture of feces, excess antibiotic-laden fish feed, and decayed salmon carcasses that filtered out of the pens. Piercing acoustic sirens installed to keep seals and sea lions away from the salmon pens drove the killer whales out of the archipelago. To rid their fish of sea lice, farmers dosed them with ivermectin, a potent antiparasitic known to kill some species of shrimp. Farmed fish contracted antibiotic-resistant strains of furunculosis, a fatal disease that produces ugly skin ulcers; wild salmon that migrated past their pens also contracted the disease.

"I've been catching salmon up here all my life," says Chris Bennett, a fishing guide who runs a floating lodge in the archipelago. "I'd never seen a fish with a lesion until the farms came in."

Some of the early farmers raised native Pacific chinook and coho, but most soon switched to the more profitable Atlantic salmon. The fast-growing, hardier, and comparatively docile Atlantics adapted better to life in a crowded pen. When local environmentalists voiced alarm about introducing the nonnative Atlantic species into Pacific waters, the industry and the provincial government dismissed their worries. If any escaped, they said, they'd never survive. "These fish are inept at surviving in the wild," says Anita Peterson, spokeswoman for the British Columbia Salmon Farmers Association. "They're seal and sea lion fodder."

The fish did escape, either because of human error or when storms or hungry sea lions tore the nets. According to the Canadian government, in the past decade nearly 400,000 farm-raised Atlantics escaped into British Columbia waters and began competing with wild species for food and habitat. (That number relies primarily on escapes reported by fish farmers; environmentalists put the actual figure closer to 1 million.) And they survived. After years of speculation about whether Atlantics could make it on the lam, in 1998 researchers found that Atlantics had actually spawned in the Tsitika River on Vancouver Island, a few miles west of the archipelago. By the summer of 2001, Atlantics had turned up in 77 British Columbia rivers and streams.

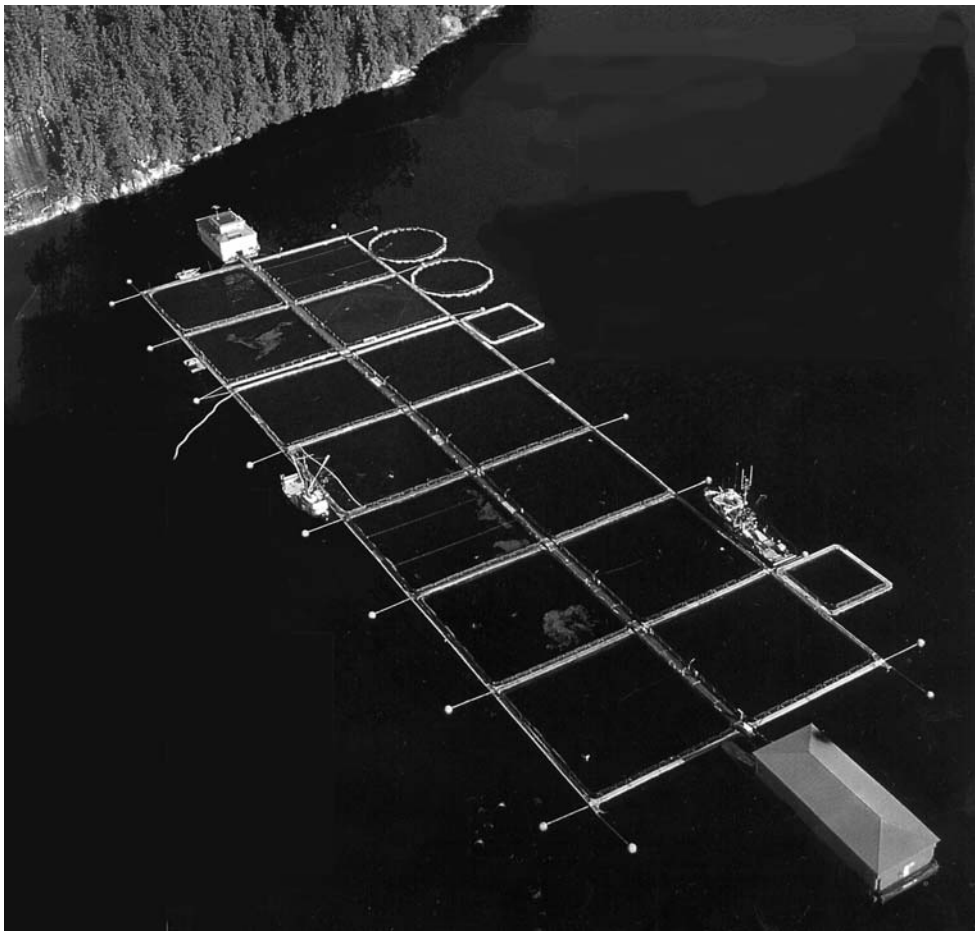
"We were told they wouldn't escape. They escaped," says Jennifer Lash, director of Living Oceans Society, a local conservation group. "We were told they wouldn't survive in the wild. They survived. We were told they wouldn't get upstream. They got upstream. We were told they wouldn't reproduce. They've reproduced."

Instead of relieving the pressure on wild salmon, industrial fish farming has become one of their greatest threats. Besides mucking up the farm sites and passing lice and disease on to wild fish, escaped Atlantics threaten to outcompete an already stressed population of Pacific salmon, replacing a diverse genetic pool with a single strain of invasive fish that may be ill adapted for long-term survival.

An environmental outcry forced the provincial government to impose a moratorium on new farm sites in 1995 and to subsidize farmers if they experimented with greener, solid-wall pens. But the industry responded by stuffing twice as many fish into the 87 active sites. By 1999, British Columbia's fish farmers were cultivating $292 million worth of farmed fish, more than 11 times the value of Canada's wild Pacific salmon catch.

Now, with British Columbia's industry-friendly premier, Gordon Campbell, in office and the province hurting for jobs, the industry is pushing to open new megafarms in some of the region's most ecologically sensitive spots.

"I can appreciate the value of the jobs," says Glen Neidrauer, a game warden who patrols the archipelago for Canada's Department of Fisheries and Oceans. "But why would you jeopardize a place so pristine? We're not just talking fish—all the birds, bears, and sea mammals depend on wild salmon. I wonder how long you can mess with that until they finally don't return."



The conflict in the Broughton Archipelago is the latest skirmish in what is emerging as a global environmental battle over high-intensity fish farming. Environmentalists and fishermen in Chile have called for a moratorium on that country's radically expanding salmon-farm industry. Conservation activists in Scotland, Canada's eastern province of New Brunswick, and Maine are battling deadly farm-incubated diseases. Yet despite its environmental problems, salmon farming remains a booming business. As the production of wild fisheries continues to push its limits, aquaculture corporations are expanding existing farms and seeking out new sites, such as Iceland, for their "blue pastures." Some companies are already looking past salmon. In Hawaii, for instance, the industry is keeping close watch on a pilot project to raise Pacific threadfin in open-ocean net pens. If the fish thrive, the industry's next conquest may be the pristine waters of the South Pacific.

"Aquaculture has grown in huge bounds, faster than anything we've seen in traditional agriculture, and mistakes have been made," says Rosamond Naylor, a senior fellow at Stanford University's Center for Environmental Science and Policy who recently published a study of international fish farming in the journal Nature. "The question is, Can we make changes fast enough—before the damage becomes irreversible?"

Back when we envisioned the future in utopian terms, aquaculture was an integral part of the dream. As surely as we would all drive flying cars, wet-suit-clad cultivators would farm the seas and feed the world with their bounty.

It has not turned out as clean and easy as we'd imagined.

Modern fish farming traces its roots to Norway in the 1960s, when that nation's wild salmon stocks crashed due to overfishing, overdamming, acid rain, and development. Inspired by the success of Danish trout farmers, salmon cultivators found Norway's sheltered fjords ideal for farming salmon in ocean net pens.

European restaurateurs loved the farm-raised Atlantics, which allowed them to offer fresh salmon year-round. As demand increased, the industry expanded to Scotland, Ireland, and New Brunswick—anywhere that offered cheap access to cold, sheltered salt water. Meanwhile, problems began to crop up. In Norway, the growth of fish farming was marred by outbreaks of disease and parasites and the escape of millions of farm-bred salmon.

In the 1980s, Europe's salmon-farming corporations sought to continue their westward expansion. They eyed two promising areas: Alaska and British Columbia.

Spurred by a politically powerful commercial fishing industry, Alaska outlawed salmon farming outright. British Columbia, on the other hand, welcomed the industry with open arms. In a province whose economy remains bound to extractive industries like logging, capitalizing on its marine resources seemed to make good economic sense.

"In the '80s and early '90s, Norway strengthened its environmental regulations in response to the problems they were having with fish farms," says Lynn Hunter, a former

Canadian member of parliament who now works on fisheries issues for the David Suzuki Foundation, a leading Canadian environmental group. "So a number of Norwegian farmers moved to Canada, where they wouldn't face such a strict environmental regime. We got their bad apples."

Today, Alaska's wild salmon fishery ranks among the healthiest, best managed in the world. But British Columbia's commercial fishing industry barely survives; in 1999, the wild salmon harvest was the lowest in 50 years. The Canadian government is trying to keep the industry afloat by buying out commercial fishing licenses and decreasing the number of boats in the water. Canada's farmed-salmon industry, meanwhile, now ranks fourth in worldwide production. (In the United States, so far, salmon aquaculture has been limited to a few sites in Maine and Washington state.)

During the 1990s, salmon farming exploded around the globe. Stymied by environmentalists from further expansion in Canada, the industry headed to Chile, where farming corporations found cheaper labor and few environmental restrictions. The past decade also saw a frenzy of takeovers and mergers, as large companies—most notably Stolt-Nielsen, a Norwegian shipping company, and Nutreco, a Dutch conglomerate—bought smaller ones in order to achieve "vertical integration of the value chain," industry-speak for the ability to hatch salmon fry, produce fish-food pellets, raise market-size fish, and distribute filets worldwide. The consolidation of the supermarket industry also fueled the merger mania; megagrocers preferred to contract with one supplier large enough to fill their freezers. This is how your Costco comes to offer farmed Atlantic filets at $3.99 a pound, less than half the price of wild salmon.

Farm-raised Atlantic salmon now rule the global premium fish market. In 2000, fish farmers raised 860,000 metric tons of Atlantic salmon—more than 1 metric ton for every wild salmon caught in the North Atlantic. Chilean-raised Atlantics are dumped so cheaply in the United States that they're making it hard for Alaska fishermen to make a living. "When you've got Chilean filets hitting the Port of Miami at $2 a pound, raised by workers making $1.50 a day, that's when the WTO hits home," says John van Amerongen, editor of the Alaska Fishermen's Journal.

For now, major environmental groups including the National Audubon Society and the Sierra Club recommend against eating farmed salmon because of the industry's poor environmental record. Recognizing that aquaculture is likely to continue to grow, however, many environmentalists have also focused on moving the industry toward more sustainable practices. Two start-up companies in the Pacific Northwest are experimenting with a promising technology that uses solid-wall pens, which, though more expensive, could eliminate the problems of escaped fish and disease transfer to wild stocks. "Closed-containment systems," says Rebecca Goldberg, a senior biologist with Environmental Defense, "are definitely a step in the right direction."

Alexandra Morton doesn't get too close to the fish-farm workers anymore. "They all know my boat," she says. "I've had 'em moon me, call me all kinds of nasty names." She gives a Stolt Sea Farm site wide berth, and then zips into a nearby cove and gets out her dip net.

Morton, who moved to the Broughton Archipelago nearly 20 years ago to study the habits of local orcas, became an anti-fish-farming activist in the late 1980s when the industry's "seal scarers" drove the killer whales out of their traditional feeding grounds. To placate Morton, many of the farming companies turned off their alarms, and the orcas eventually returned. "It wasn't just me," she says. "Some farmers think they actually attract more predators—they call it the dinner-bell effect."

Morton stands at the stern of her boat, dip net poised, waiting for two pink salmon smolts to swim within striking distance. A sea lice infestation broke out three weeks ago among this run of wild pinks, and Morton wants to check these two for parasites.

She nets the fish and releases them into a saltwater tank. Morton scoops one into her hand. "This one's loaded," she says. Parasites as small as sesame seeds scuttle across the fish's tiny scales. Through a magnifying lens, the lice resemble tiny horseshoe crabs.

"He's got a bunch of little ones hanging off his throat, too," says Morton. Baby lice, hangnail-size, beard the fish. Over the next few weeks they will eat the salmon's mucus, skin, and blood, killing their host. "This guy," Morton says, "doesn't have a chance."

Her sampling indicates that wild smolts near fish farms carry far more lice than smolts caught away from the industrial sites. Morton fears that B.C.'s salmon may suffer the fate of Ireland's fabled sea trout, which were

devastated in the early 1990s by a fish-farm-incubated infestation of sea lice. British Columbia's salmon farmers say lice hasn't been a problem, but local fishermen believe the close-packed Atlantic salmon act as disease and lice hothouses. "They're disease reservoirs stuck right on the migration path of wild salmon," says fishing guide Chris Bennett. "You couldn't dream up a better pathogen vector." Fish farmers counter that they're getting a bad rap. Their cages are sited—for environmental reasons—away from freshwater streams, in the high-saline waters where sea lice flourish. Of course you'll find more lice around our farms, they argue; that's where the saltier water is.

Morton disagrees. After documenting her latest lice survey, she calls an official at the government's Pacific Biological Station research lab in Nanaimo, 150 miles south, and pleads with him to investigate the outbreak. "Look," she says, "we've got a real problem up here."

It's a tough sell. The agency that runs the Biological Station, Canada's federal Department of Fisheries and Oceans (DFO), is charged with both promoting fish farming and conserving wild salmon runs. That dual mission has led the dfo to turn a blind eye to the environmental threat posed by the farms. Earlier this year the auditor general, the Canadian government's independent investigator, scolded the DFO for failing to enforce Canada's Fisheries Act, the nation's most sacred environmental law, when the law came into conflict with the salmon-farming industry.

Morton has allies, though. Using her data, a group of First Nations leaders calls a press conference in Victoria to denounce the fish farms and the government's failure to regulate them. Dressed in full tribal regalia, they threaten to take action if the government doesn't. "Our people are prepared to do what it takes to take care of our land, water, and resources," says Percy Williams, chief of the Kwicksutaineuk-kwaw-mish tribe.

The DFO relents and dispatches a research vessel. By the time the boat reaches the archipelago, however, the run of infected pinks has passed out to sea.

As industrial salmon farming swept westward from Norway, it left a trail of environmental destruction in its wake. In Norway between 1989 and 1992, furunculosis-infected farm fish escaped and spread the disease to 550 other farms and 20 Norwegian rivers. In the 1990s, Infectious Salmon Anemia (ISA), a sort of hoof-and-mouth disease of the sea, ripped through farms in Scotland and New Brunswick. The New Brunswick Fisheries and Aquaculture Department ordered the slaughter of more than 1.2 million salmon in 1998 in an effort to control one ISA outbreak. That same year, ISA ravaged more than 11 farms in Scotland. In both cases, the disease eventually made its way into wild stocks. And just this past March, ISA spread into U.S. waters, infecting salmon farms in Maine.

"Whenever you raise organisms in dense concentrations, disease transfer happens a lot faster," says James Karr, a professor of fisheries at the University of Washington. "When these fish are moved from one region to another, they may move disease that's never been found in that area before."

From the air, a salmon farm looks like a posh racquet club under floodwater. Farms usually float within a few hundred yards of shore, with the nets anchored by heavy cables. Hatchery-born fish are transferred to net pens when they're 10 months old. In their new home, they're fed pellets made of fish meal, fish oil, vitamins, and, as needed, antibiotics. Farmed salmon eat two to five pounds of protein for every pound of weight gained—protein that comes from small pelagic fish like anchovies, mackerel, herring, and sardines. Typically, 15,000 to 50,000 fish share a single pen, and 8 to 10 pens operate on a single site. Since the pens are open to the surrounding water, any waste generated by the fish flushes into the local ecosystem.

Farmers count on the tide to disperse net pen effluent, but the water often doesn't flush it all away. A salmon farm of 200,000 fish releases an amount of fecal solids roughly equivalent to a town of 62,000 people. That's a lot of fish poop, and it can create an oxygen-depleted "dead zone" on the seafloor under the net pens.

Then there are the jailbreaks. Everywhere the Atlantics go, they escape. In Norway, at least half a million farmed salmon escape from pens every year. Canadians worry about farmed fish displacing wild species. But in Norway, that battle is already over. The wild lost. Farmed Atlantics now outnumber wild salmon spawning in Norwegian rivers. "Salmon aquaculture," the World Wildlife Fund said in a report issued last May, "now constitutes a major threat to wild salmon stocks—if not the major threat."

On the Pacific Coast, it's still an open question whether escaped Atlantics will displace native Pacific salmon. "Native salmon have evolved over thousands of years

to live in this region," says the University of Washington's James Karr. "Their life histories are finely tuned to live in concert with other organisms in the region." Each run of Pacific chinook, coho, sockeye, pink, and chum salmon knows how to survive in a specific spawning stream. When one stream goes haywire—perhaps it's too hot, too low, or gets dammed—salmon in other streams survive. Farmed Atlantics are artificially bred to get fat fast and survive the close confines of a net pen. By allowing a homogeneous species of Atlantics to replace the diverse species of wild salmon, we'd be setting up an entire ecosystem for a horrendous crash. If that one species failed, all salmon would fail. And the reverberations of that would be felt up and down the food chain.

On days like this it's almost not work," Brian Wiley says as he pilots a skiff between salmon pens. The brilliant afternoon sun bounces off the emerald waters of Upper Retreat Pass. Wiley, a 42-year-old fishfarmer, gives an unannounced visitor a brief tour of his net pens, a site 20 miles east of northern Vancouver Island that's owned by Stolt-Nielsen. He is buoyant; his eight-day shift ends in a couple of hours, and a company boat is coming to take him home to Campbell River for six days off.

Like any farmer, Wiley is proud of his product. "You get attached to 'em," he says. "They're your fish. That's what's cool about the work. They come in as smolts and stay with you for a year or two."

This farm, one of Stolt's 27 sites in British Columbia, holds 308,000 Atlantic salmon. Wiley and three co-workers pour 10 metric tons of food pellets into the pens each day and monitor the fish with underwater video cameras to see when they stop eating. "That way we don't waste food," says Wiley. "The pellets go for about $1,300 a ton, so you don't want to waste it or kill any fish."

When the fish near market size, farmers add astaxanthin, a pigment similar to beta-carotene, to their feed to give their gray flesh a salmony pinkish glow. (In the wild, asta- xanthin is synthesized by microalgae and passed up the food chain. Since farm-raised salmon eat only pellets, they must be dyed pink. The pharmaceutical giant Hoffman-La Roche, a leading supplier of astaxanthin to salmon farms, distributes a "SalmoFan"—kind of like a paint-store swatch—to let farmers perfect the desired hue.)

Brian Wiley and his colleagues are only a 10-minute boat ride from the island village of Echo Bay. But they don't mix much with the locals. A fish tech is a lot like a logger—usually single, male, in his 20s or 30s, strong enough to handle the demanding physical work, willing to call in rangers to shoot seals and other predators, not overly concerned with the environmental nuances of the watershed in which he works. The farm's floating bunkhouse has pretty much everything he needs: fully stocked kitchen, booming stereo, satellite TV.

"When I first heard about this job, I thought, 'Oh great, feeding fish all day,'" says Wiley. "But you've got all kinds of stuff to deal with out here. We take plankton samples every day, do our environmentals, test the salinity of the water, the dissolved oxygen. Lot of stuff to know about."

A lot of jobs did follow the fish farms to British Columbia. They just didn't materialize so much in the archipelago, which bears the brunt of the environmental damage and ongoing risk. But back in Vancouver Island towns like Port Hardy, Port McNeill, and especially Campbell River, which bills itself as the Salmon Capital of the World, the salmon farms employ fish processors and farmers, and support businesses like boxing companies, net makers, trucking firms, construction contractors, and fuel docks.

"This industry is critical to our small communities," says Anita Peterson, the spokeswoman for the Salmon Farmers Association. Not all small communities see the benefits, however, and the taverns of Port McNeill have seen heated arguments between pro-farming townies and anti-farming islanders.

Technology may ultimately help broker peace on the coast. Two companies, Future Sea Technologies (FST) of Nanaimo, British Columbia, and MariCulture Systems of Lake Stevens, Washington, are developing closed-containment pens that seal farmed salmon off from the outside water. These pens can cost up to one and a half times as much as conventional nets to install but pay off in faster-growing, healthier fish. And they have caught the attention of environmentalists and scientists. "Certainly the problems relating to escapement of fish and the waste disposal of fish would be largely or entirely solved with a closed-containment system," says Rebecca Goldberg, the senior scientist with Environmental Defense.

A major problem, though, may not just be the initial cost: It may be that the systems appear too eco-friendly. Aquaculture corporations have become so embittered toward environmentalists that they're leery of trying anything that comes with a seal of green approval. "Our customers are fish farmers," says FST operations director Andy Clark, "but the environmental lobby says fish farming is the second coming of the devil—and they point to us as the savior. We're caught in the middle."

Moreover, many in the fish-farming industry do not acknowledge that there is a problem with open-flow pens. "With a closed system," says Peterson of the Farmers Association, "you're taking an absolutely prime growing environment and trying to artificially re-create it. Why would you do that?"

Aquaculture is not going away. We're eating more fish even as the oceans and rivers run dry. Since 1989, the world's commercial seafood catch has stagnated between 85 and

90 million tons. The United Nations Food and Agriculture Organization reported last year that most of the world's fishing areas have "reached their maximum potential for capture-fisheries production, with the majority of stocks being fully exploited." Meanwhile, aquaculture output has nearly tripled, from 12.3 million tons in 1989 to 30.9 million tons in 1998.

This is the paradox of salmon farming. "Aquaculture," writes Stanford's Rosamond Naylor, "is a possible solution, but also a contributing factor, to the collapse of fisheries stocks worldwide."

The National Audubon Society, Environmental Defense, and the Sierra Club not only caution against eating farmed salmon; they in fact recommend eating wild Alaskan chinook and coho and other salmon that are sustainably fished.

Meanwhile, other groups including the David Suzuki Foundation and Living Oceans Society have begun campaigns to educate consumers about the health benefits of eating wild salmon, which, unlike farmed fish, contain no antibiotics, are not artificially dyed, and are higher in the omega-3 fatty acids that lower the risk of heart disease and breast cancer.

"The fish-farming industry has fed us a line about eating farmed salmon to protect wild stock," says the Suzuki Foundation's Hunter. "Actually, the reverse is true. If you purchase farmed salmon, you're contributing to the risk to the wild fish."

It's a counterintuitive proposition: Eat the wild to save the wild. But if enough consumers vote with their purchases, fish farmers may start cleaning up their act. To that end, Hunter and her allies have come up with a slogan to beat the industry's marketing machine. You can see it on her car's bumper sticker as she drives away: Wild Salmon Don't Do Drugs.

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Columbia River Channel Deepening

Channel deepening is again being examined by permit-granting state and federal agencies. Last year the National Marine Fisheries Service (NMFS) withdrew its Biological Opinion following a legal threat which Salmon for All joined. Since that time, the Army Corps has been working with the project sponsors (Ports), NMFS, and US Fish and Wildlife Service to evaluate the science and develop a plan that would not harm listed species. On January 3,2002 the Army Corps released a new Biological Assessment to support its efforts to deepen the Columbia River navigation channel from 40 to 43 feet. The new Biological Assessment adds 6 ecosystem restoration projects to aid in estuary restoration efforts. One project, the Lois Island Embayment Habitat Restoration, would dump 8 million cubic yards of dredged material in the Lois-Mott Island embayment near Tongue Point. This action would be devastating to the fishery in that area. Initially, this site was considered as a dredged material disposal site, but due to its distance from the navigation channel, was eliminated because of the cost of transporting material. We believe the Corps has simply renamed the site from a disposal site to a restoration site, with very little consideration to REAL salmon restoration.

Salmon for All is pledged to the restoration of Columbia River salmon. However, it is our firm position that ecosystem restoration should not be born solely on the backs of the fishing industry. The Lower Columbia River Salmon Business Plan for Terminal Fisheries (Salmon for All, 1996) estimates an economic benefit to coastal communities to be between $193 to $276 per 100 smolts released. Current projections for this site estimate a benefit to the lower river community could be as high as $6.5 million annually. Elimination of the Tongue Point facility would be economically destructive for our community. The commercial fishing industry remains committed to doing our part to protect endangered species, as witnessed by the efforts of the industry to re-gear to live-capture methods this spring. This commitment to conservation should be matched, not thwarted, by the federal government.

For more information about the dredging and ecosystem restoration project, please call Salmon for All at (503)325-3831.

Project should be grounded

If your articles on the Port of Portland's plan to dredge the Columbia River didn't convince me that it was a bad idea, the letters in favor of it certainly do. None of them has refuted your facts and figures. Instead, there are generalities such as that the articles are "plagued by inaccuracies" or how important "U.S. marine transportation is," Or how shipping by boat reduces truck traffic.

It's clear that this project can't be supported on its merits and should not go ahead. The economic benefits are minimal and the potential damage to salmon is all too real.

BYRON RENDAR Northeast Portland

Develop Astoria port instead

My life has been closely associated with the Columbia River, starting in the salmon fishing business in 1930. Now I am a tuna fisherman, captain of a fishing vessel delivering occasionally as far as New Zealand, with Astoria for my base port

I see large ships loading at Portland as obviously absurd.

Astoria is in Oregon. Developed properly for Asian trade, Astoria has a decided advantage over all other possible West Coast competition.

The best thing for Oregon, now and into the future, is to prepare the only viable location for the future— Astoria—not infinite Band-Aids for a port (Portland) that cannot meet the needs of ocean ships.

VINCE B. MILLER Rosburg, Wash

Hold Army Corps accountable

The U.S. Army Corps of Engineers must be held accountable for presenting Oregon with an honest cost' analysis on its proposed dredging: project. It doesn't take a Ph.D. in economics to realize that its cost/benefit analysis is heavily weighted toward its aims to secure funding to do the jobs it knows.

Oregon cannot allow this makeshift plan to slide. The Oregonian did well to bring to light many shortfalls in the corps' forecasts for revenue. Further, though, the ecological costs to critical wildlife estuaries, tributary river flows and economies based on these natural resources are beyond the corps' areas of knowledge or concern.

COLIN PARK Canby

Environmental health devalued

I was struck by the familiar, jaded ring of the arguments being used by the Port of Portland to deepen the channel of the Columbia River while stirring up the toxic ghosts of industries past, supposedly to enhance the economic health of our region.

Once again, environmental health is being asked to take the back seat so that an insatiable human hunger for money and what it can buy may be appeased, and once again we are asked to believe that all the residents will benefit.

Historically, every negative impact upon the environment wrought by the hands of commerce has been justified by this firmly entrenched, most-sacred cow of profit motive.

We should be working to clean up our environmental messes, instead of adding to the existing degradation.

LeNOIR KALI HAYWARD Northeast Portland

Army Corps can't be trusted

I followed your three-part article (The Oregonian) on the dredging of the Columbia River and want to commend you on your excellent coverage of the many issues involved with this project.

First of all, it is apparent that the U.S. Army Corps of Engineers cannot be trusted when it comes to an accurate analysis of the costs and benefits of this project. This seems to be consistent with many of its other projects. Thanks to The Oregonian, many of us were able to have a realistic look

at the real costs and benefits.

I think a similar investigative report focused on the four Snake River dams might reveal that it makes sense to remove these dams to ensure the restoration of wild salmon. In fact, it might make a lot more sense than hundreds of millions of dollars on so-called "fixes" that keep coming to the table.

JEFF MARKS Northeast Portland

Smelt King Defends Title

Kelso, WA - Darwin Weber once again has defended his title of swallowing smelts.

After all, it's rare the champion who can boast of winning every competition he's entered over a period of 30 years. But Weber did just that during the weekend, swallowing 77 smelt in 30 minutes to win the Kelso Eagles' smelt-eating contest. Weber, 54, of Longview has won each time he's entered since 1972.

"I like fish, but I don't really care for smelt," admitted the 210 pound Weber, who won $50 and the blue ribbon. "I'm waiting for someone to beat me so I can retire."

Weber's most formidable challenger was Jeff Deaver of Castle Rock, Wash., who is 22 years younger and 140 pounds heavier. But Deaver slowed as the time ticked away, finishing second eating 70 smelt.

"He was born with two stomachs," Deaver said of Weber. "Maybe a sea mammal can do it; I don't know."

Willie Dixon, 63, of Longview finished third after eating 58 smelt.

Weber's consumption was not a personal best. He's twice eaten 106 smelt in the competition, despite the 30-minute time limit.

Non-Indian Fisheries

Past Lower River Mainstem Winter Gillnet Salmon Seasons

Winter gillnet salmon season dates have been established since 1878. Past season dates were January 1-March 1, 1878-1942; January 29-March 1, 1943-1958; February 15-March 1, 1959-1967; and since 1968 (excluding 1995 and 1997-1999) seasons have opened as early as February 10 and closed as late as March 11 with seasons varying from one to 20 days. No lower river winter gillnet salmon seasons occurred during 1995 and 1997-1999; however, small numbers of spring chinook were landed in conjunction with winter target sturgeon seasons during these years.

Since 1970, chinook landings have ranged from 100 to 18,300 fish. A minimum mesh size restriction of 7 1/2 inches was placed on the fishery in 1970 to reduce steelhead handle. Subsequent to the prohibition on the sale of steelhead in 1975, the minimum mesh size restriction was increased to 8 inches which continued through 2001. No salmon fishing has been allowed above Kelley Point at the Willamette River mouth during winter salmon seasons since 1975 to reduce catch of upriver spring chinook. Since 1957, all non-Indian commercial fisheries have been restricted to Zones 1-5 (below Bonneville Dam) and treaty Indian commercial seasons to Zone 6 (Bonneville Dam to McNary Dam).

During the 1975-1990 winter salmon seasons, the Joint Staff estimated that an average of about 250 steelhead were handled each fishing day, with a seasonal average of less than 500 dead steelhead annually. The steelhead estimates were based on changes in time, area, and mesh size regulations plus observations made onboard gillnet boats during 1970-1977 and 1986 winter salmon seasons. Monitoring data collected during the 1975-1977 and 1986 winter salmon seasons indicated that about 17% of the steelhead handled were immediate mortalities which corresponds to an average of 40 steelhead mortalities per day. Based on observations during the 1991-1993 winter salmon seasons in the Marine Mammal Observer Program, less than 100 steelhead per fishing day were handled, with 17% assumed to be immediate mortalities based on the aforementioned sampling data. This provides a current average of 16 steelhead mortalities per fishing day, considerably less than the 40-per-day average assumed for prior winter salmon seasons.

White sturgeon have been an important commercial species during winter salmon seasons. Catches ranged from 500-1,200 during the 1989-1993 winter salmon seasons. White sturgeon landings during winter salmon seasons comprised 10-21%, and averaged 15%, of the total annual white sturgeon gillnet landings during 1989-1993. Sturgeon management and quotas changed several times between 1993 and 1997. These changes culminated with the adoption of the Olympia Accord by Oregon and Washington in October 1996, and since 1997 sturgeon management has been guided by two Joint State Agreements on sturgeon management. Since 1997 sturgeon directed fisheries have operated from early January through mid-February with landings during winter sturgeon seasons averaging 2,500 white sturgeon or 22.1% of the annual white sturgeon gillnet landings.

Past Select Area Fisheries

Test fishing operations regularly occurred in Select Areas prior to release of fish or adoption of fisheries. Test fisheries have consistently been the basis on which initially fisheries were proposed. Expansion in time or area has consistently been preceded by positive results from test fishing operations. Results from test fisheries in Select Areas are typically corroborated by ensuing commercial fisheries.

Spring chinook commercial fisheries in Select Areas were initiated with 9-day fishing seasons in Youngs Bay during 1992-1994. Fisheries remained at low levels and limited to Youngs Bay only through 1996 with landings of less than 1,000 spring chinook annually. Landings in the Youngs Bay commercial fishery have increased steadily from 800 spring chinook landed in 1997 to 5,600 spring chinook landed in 2001. Initially seasons in Youngs Bay were restricted to the spring fishing period with seasons occurring primarily during late April through early June. As returns increased winter and summer seasons were adopted in an attempt to harvest 100% of the returning adults. Winter seasons during mid-February through mid-March were initiated in 1998 to harvest early returning age 5 spring chinook. Beginning in 1999 summer seasons during mid-June through July were adopted to increase harvest on late returning age 4 spring chinook and early returning Select Area bright (SAB) fall chinook. Fisheries have consistently been closed during mid-March through mid-April to minimize the handle of non-local spring chinook stocks whose abundance peak during that time.

Commercial fisheries in Blind Slough were initiated in 1998 with a 9-day spring season that resulted in a catch of 60 spring chinook. Since 1998 annual landings have steadily grown with a catch of 2,000 in 2001. The initial winter season occurred in Blind Slough in 2000 with only spring seasons occurring prior to 2000. As with Youngs Bay these early winter seasons targeted on early returning age 5 spring chinook that were available prior in the time period when a significant number of non-local stocks were present. No summer seasons have been adopted in Blind Slough. The area fished was initially limited to Blind Sough but as returns increased the area was expanded in 1999 to include the waters of Knappa Slough from the mouth of Blind Slough to the east end of Minaker Island. The expanded area was adopted to increase catch and decrease congestion during peak fishing periods.

Commercial fisheries in Tongue Point were initiated in 1998 with a 9-day spring season that resulted in a catch of 30 spring chinook. As was the case in Blind Slough, Tongue Point landings have steadily increased with a catch of 1,600 spring chinook in 2001. The Tongue Point commercial fishery was managed in concert with the Blind Slough fishery with winter seasons being initiated in 2000 to harvest early returning age 5 spring chinook. To date, no summer

fisheries have occurred in the Tongue Point Select Area. The fishing area was expanded in 1999, as was the case in Blind Slough, to include the South Channel between the confluence with the John Day Slough and the Prairie Channel to increase catch and reduce congestion during peak fishing periods.

North of Cape Falcon:

What to expect this fall...

The 2002 North of Cape Falcon negotiations have concluded, setting the direction for fall commercial fishing opportunity. The good news this year will be high returns of fall chinook to the Columbia Basin. Managers are predicting over 660,000 fall chinook will enter the mouth of the river. Unfortunately, coho predictions are not strong. Just over 150,000 coho are expected this year.

State managers anticipate the non-Tribal commercial feet to harvest nearly 40,000 chinook and 30,000 coho. They have modeled several nights of chinook directed fishing opportunity in early August followed by chinook fishing in area 2S. The fleet will have limited coho opportunity and chinook fishing on the main stem in late September and early October. Later in October, coho fishing will depend on actual run size updates as they become available.

Need for Speed!

The Royal Norwegian Navy's new line of Skjold patrol boats are some of the fastest naval watercraft anywhere, reaching speeds of more than 55 knots—or about 65 miles per hour. With their Rolls Royce engines and slick design, these patrol boats are making big-time waves.

For years, the Norwegian Navy has researched and developed lightning-fast vessels that are quick enough to defend the coasts of its homeland, and the high-tech Skjold line has recently broken new ground. Currently, these "coastal corvettes" are cruising U.S. waters as the two countries share information.

See photos and complete descriptions on our web site at http://www.crfpu.org

2002 MANAGEMENT GUIDELINES
Endangered Species Act Consultation

Salmon and Steelhead

Since 1991, the NMFS has identified the majority of Columbia River basin salmon and steelhead populations as requiring protection under the ESA. The table below describes the status of Columbia River basin ESU's. Unless otherwise noted, the listed component includes wild/natural populations only.

Federally listed Salmon, Steelhead, and Smelt of the Columbia River Basin.(1)

Species - ESU	Designation	Listing Date	Effective Date
Chinook			
Snake River Fall	Threatened	April 22, 1992	May 22, 1992
Snake River Spring/Summer	**Threatened**	**April 22, 1992**	**May 22, 1992**
Upper Columbia Spring	**Endangered**	**March24, 1999**	**May24, 1999**
Upper Columbia Summer/Fall	**Not warranted**		
Middle Columbia Spring	**Not warranted**		
Lower Columbia River Spring/Fall	**Threatened**	**March24, 1999**	**May24, 1999**
UpperWillamette Spring	**Threatened**	**March 24, 1999**	**May24, 1999**
Deschutes River Fall	Not warranted		
Steelhead			
SnakeRiver	**Threatened**	**Aug. 18, 1997**	**Oct. 17, 1997**
Upper ColumbiaRiver (2)	**Endangered**	**Aug. 18, 1997**	**Oct. 17, 1997**
Lower ColumbiaRiver	**Threatened**	**March 19, 1998**	**May 18, 1998**
Middle ColumbiaRiver	**Threatened**	**March25, 1999**	**May24, 1999**
Southwest Washington	Not warranted		
UpperWillamette	**Threatened**	**March25, 1999**	**May24, 1999**
Sockeye - Snake River	**Endangered**	**Nov. 20, 1991**	**Dec. 20, 1991**
Chum - Columbia River	Threatened	March 25, 1999	May 24, 1999
Coho - Columbia River (3)	Candidate		
Smelt - Columbia River	**Petition not accepted**		

(1) The ESU's in bold are present in the Columbia River basin during the time when fisheries described in this report occur and therefore may be impacted by these fisheries.
(2) Includes hatchery fish.
(3) In 1991, the NMFS decided not to list wild coho of the lower Columbia River (Columbia River and its tributaries below Bonneville Dam, exclusive of the Willamette River) because the remaining small remnant runs are predominately hatchery-maintained and are not a species as defined in the ESA. In 1995, the NMFS combined Columbia River coho with Willapa Bay and Grays Harbor coho into a single evolutionarily significant unit (ESU) and identified it as a candidate species, worthy of further study. In 2000, the NMFS began another status review of lower Columbia River coho.

There were 1,720 sockeye caught in platform and hook-and-line C&S fisheries and 5,580 sockeye caught in commercial fisheries. The overall catch of 7,300 was 6.3% of the return of 116,623. The TAC estimated that three of the sockeye caught were Snake River sockeye.

Steelhead harvest during spring and summer fisheries was more than in 2000 with tribal fishers harvesting 617 steelhead during spring fisheries and 8,220 steelhead during the summer fisheries. Most of the 8,837 total were Group A summer steelhead. These fish were not sampled to determine a hatchery to wild ratio; therefore, the proportion wild sampled at Bonneville Dam in 2001 is the best estimate available. Wild Group A summer steelhead comprised 38.8% of the steelhead return at Bonneville from April 1 through July 29. Applying this proportion to the catch of 8,837 results in an estimate of 3,428 wild Group A summer steelhead in 2001 spring and summer fisheries or 2.5% of the 137,300 wild Group A run passing Bonneville Dam in 2001.

2001 Ceremonial and Subsistence Entitlement

2001 Ceremonial and Subsistence Entitlement Summary
C&S permit gillnet spring fishery
7,387 spring chinook
Winter gillnet fishery
86 spring chinook
C&S platform spring fishery
3,460 spring chinook
Commercial gillnet fishery
43,630 spring chinook
C&S platform summer fishery
830 summer chinook
Total: 55,393 Spring and summer chinook

The Interim Management Agreement as well as the expired CRFMP identified a minimum C&S annual entitlement to the Columbia River treaty tribes of 10,000 spring and summer chinook, or fish of equivalent quality. After spring and summer C&S platform and permit gillnet fisheries are accounted for, the balance of the entitlement is to be provided to the tribes by the states of Oregon and Washington. The full entitlement was achieved in 2001 without using surplus fish from ODFW or WDFW due to the record large upriver spring chinook return in 2001.

2001 Shad Fisheries

In recent years treaty Indian commercial harvest has occurred primarily at The Dalles Dam east fishway exit on the Oregon side of the river, with a few shad harvested during traditional dipnet fisheries. This past year we saw some additional shad harvested in the treaty Indian commercial sockeye fishery. In 2001, treaty Indian fishers caught a total of 9,014 shad (24,109 pounds). Harvest from fishing five days between June 13 - 21 at The Dalles east fish ladder exit totaled 8,327 shad (22,257 pounds), while 480 shad (1,294 pounds) were caught in four days between June 25 and July 1 during the treaty commercial sockeye fishery, and 207 shad (558 pounds) were sold in traditional dipnet fisheries throughout the year.

JOINT STAFF REPORT CONCERNING COMMERCIAL SEASONS FOR SPRING CHINOOK, STEELHEAD, STURGEON, SHAD, SMELT, AND OTHER SPECIES AND MISCELLANEOUS REGULATIONS FOR 2002

THE COMPACT

The Columbia River Compact is the entity charged with congressional and statutory authority to adopt seasons and rules for Columbia River commercial fisheries. In recent years, the Compact has consisted of the Oregon and Washington agency directors, or their delegates, acting on behalf of the Oregon Fish and Wildlife Commission (OFWC) and the Washington Fish and Wildlife Commission (WFWC). In addition, the Columbia River treaty tribes have authority to regulate treaty Indian fisheries. When addressing commercial seasons for salmon, steelhead, and sturgeon, the Compact must consider the effect of the commercial fishery on escapement, treaty rights, and sport fisheries, as well as the impact on species listed under the Endangered Species Act (ESA).

Although the Compact has no authority to adopt sport fishing seasons or rules, it is an inherent responsibility of the Compact to address the allocation of limited resources between sport, commercial, and tribal users. This responsibility has become increasingly demanding in recent years. The Compact can be expected to continue the recent trend of conservative management when considering fisheries that will impact listed Columbia River salmon and steelhead stocks.

SEASONS CONSIDERED

On January 31, 2002, the Compact will consider non-Indian and treaty Indian commercial winter seasons for spring chinook, steelhead, sturgeon, and smelt. Winter commercial seasons occur from January through March and spring commercial seasons occur from April through mid-May. Non-Indian target sturgeon (January through early February) and smelt (January through March) seasons were adopted at the December 12, 2001 Compact hearing and modifications to these seasons may be considered at the January 31, 2002 Compact hearing. The Compact will also be considering non-Indian commercial shad seasons which usually occur in late May and June and may consider an early fall sturgeon target season that typically occurs in early August. At this time, commercial sockeye seasons are not anticipated in 2002. Finally, there are general commercial fishery permanent rules and the anchovy and herring fishery, which is open all year in the lower Columbia River, to be considered. Other commercial seasons or modifications to seasons adopted at the January 31, 2002 Compact hearing will be considered at future Compact hearings as information on fish runs becomes available.

STOCKS CONSIDERED

Spring Chinook

Spring chinook entering the lower Columbia River from mid-February to mid-March are predominantly large, 5-year-old fish destined for lower river tributaries. Age 5 chinook are dominant throughout March and reach peak abundance in the lower Columbia River by late March. Smaller 4year-old fish enter in increasing numbers after mid-March, reaching peak abundance during April. Upriver chinook destined for above Bonneville Dam begin entering the Columbia River in substantial numbers after mid-March and generally peak in the lower Columbia River near mid-April.

Results of genetic stock identification (GSI), visual stock identification (VSI), and recovery of codedwire tags (CWTs) indicate that spring chinook destined for the Willamette River comprised the majority of the chinook caught during past winter commercial seasons and March Columbia River sport fisheries. Willamette fish predominate because they exhibit an earlier migration pattern and contain a greater proportion of early-entering 5-year-old fish than other spring chinook runs. The remaining chinook landed were destined for the upper Columbia River and other lower river tributaries such as the Cowlitz, Kalama, Lewis, and Sandy rivers, plus Select Area sites of Youngs Bay, Tongue Point, Blind Slough, and most recently Deep River. April sport fisheries and spring commercial seasons include increasing numbers of upriver stock spring chinook and 4-year old spring chinook fish destined for lower river tributaries.

Willamette River Spring Chinook

Although Willamette fish predominate in the winter gillnet season catch, the bulk of the run actually enters the lower Columbia River after the season closes. The run passes through the lower Columbia River from February through May with peak abundance during mid-March to mid-April. Migration through the lower Willamette River varies with water conditions but typically occurs from mid-March through April. Passage through the Willamette Falls fishway occurs from mid-April to mid-June with peak passage in May.

Historically, wild spring chinook spawned in nearly all east side tributaries above Willamette Falls. During 1952-1968, dams were completed by the U.S. Army Corps of Engineers (USACE) on all the major east side tributaries above Willamette Falls, blocking over 400 stream miles of rearing area for wild spring chinook. Some residual spawning areas remain, including about two thirds of the McKenzie River and about one-quarter of the North Santiam River; however, these areas are affected by upstream dams through alteration of flows and temperature. Additionally, the majority of the Clackamas River basin remains accessible although the 3-dam complex (River Miles 23-31) has

impacted migration and rearing conditions in the mainstem Clackamas River. Recent estimates place the percentage of wild fish in current Willamette spring chinook runs at about 10%, with the majority being destined for the McKenzie River. Passage over Leaburg Dam on the McKenzie River and North Fork Dam on the Clackamas River plus redd counts in the North Santiam River are currently used to index the status of wild spring chinook populations in the Willamette River Basin. The National Marine Fisheries Service (NMFS)

2002-2003 Forecast

Using the index method, the 2002-2003 prediction for upriver summer steelhead at Bonneville Dam of 447,700 fish (369,700 Group A Index, 60,600 Group B Index, and 17,400 Skamania index) nearly doubles the 2001 forecast of 249,300, but is less than the 2001 record large return of 630,200 fish. The 1-salt return was predicted using the recent 5-year average. The predicted 2-salt return is based on the 2001 1-salt return and a regression of 2-salt vs. 1-salt returns from the same cohort using 1983-2001 data. Independent estimates were made for Group A Index and Group B Index, and wild and hatchery fish. The Group A Index predicted return at Bonneville Dam for the 2002-2003 run year is 369,700, of which 105,000 (28%) are expected to be wild. The total return would be a decrease compared to the record large return in 2001 and the wild run would be the second largest since 1987. The Group B Index predicted return at Bonneville Dam for the 2002-2003 run year is 60,600, of which 21,600 (36%) are expected to be wild. The total returns would be a slight decrease from 2001, while the wild run would be the largest since sampling began in 1984. No prediction was made for lower river ,summer steelhead returning in 2002.

Shad

Shad are an introduced species brought to the West Coast from Pennsylvania stock in the 19th century. Since the extensive development of mainstem hydro-electric projects, shad runs have increased markedly in abundance and have extended their range into the upper Columbia River and into Hells Canyon of the Snake River. Since the late 1970's, all shad runs have exceeded 1 million, with a peak of over 4 million in 1990. Shad run timing extends from mid-May through early August at Bonneville Dam, with peak daily counts occurring in June. Since the run timing of the prolific shad runs overlap with upriver chinook, sockeye, and steelhead runs, harvest opportunities are limited to minimize handle and impact on salmonids.

The hatchery egg take needs for the combined Willamette and Clackamas River programs have been met annually from 1980-2001, excluding 1984. In 1994, the McKenzie River Hatchery achieved only 67% of the eggs necessary for the McKenzie River smolt program goal; however, other Willamette and Clackamas River hatcheries met their egg take goals that year. The 2001 spring chinook count at Willamette Falls of 53,973 (52,685 adults) resulted in 20,256 returning to upper Willamette River hatcheries.

With a post-Bonneville Dam era record large upriver spring chinook run (416,500 adults), the Columbia River treaty tribes were able to meet their minimum ceremonial and subsistence (C&S) entitlement as set forth in the expired "Columbia River Fish Management Plan" (CRFMP) through their own fishing efforts; therefore, no Willamette hatchery spring chinook were provided to the Columbia River tribes as part of the minimum C&S entitlement. A total of 491 surplus fish were provided to Oregon coastal Indian tribes and 629 surplus fish from upper Willamette hatcheries were supplied to local food banks. Additionally, a total of 13,120 spring chinook returning to upper Willamette River hatcheries were either passed upstream or recycled downstream through fisheries.

2002 Forecast

The ODFW staff is projecting a return of 73,800 Willamette spring chinook to the Columbia River mouth in 2002 which would be similar to the 2001 return. Age specific returns are expected to total 1,500 3-year olds, 25,900 4-year olds, 45,600 5-year olds, and 800 6-year olds. The 2002 forecast includes a correction for reduced ocean harvest in Canadian fisheries. The 2002 forecast is an increase over the 2001 preseason forecast of 61,000 but less than the 2001 actual return of 80,300.

The 2002 return of 73,800 is expected to include about 7,400 wild fish (10% of total return) which would be slightly less than the 2001 return of about 8,000. Based on the current run size prediction, a 20% harvest rate, and average conversion rates; it is estimated that the number of spring chinook passing Leaburg (McKenzie River) and North Fork (Clackamas River) dams in 2002 will total 3,200 and 2,300, respectively. An escapement of 3,200 fish past Leaburg Dam would be less than the 2001 escapement of 4,400 but would be the second largest return since 1993. An escapement of 2,300 past North Fork Dam would not surpass the 2001 escapement of 3,700 but would be similar to the 2000 escapement of 2,300.

Sockeye

The Interim Management Agreement provides for a management goal for upriver sockeye of 65,000 adult sockeye, as measured at Priest Rapids Dam, which under average migration conditions requires 75,000 adult sockeye to pass Bonneville Dam. Combined non-Indian commercial and recreational impacts on listed sockeye will be minimized to the degree possible, but shall not exceed 1% of the run entering the Columbia River. Fisheries conducted by the Columbia River treaty tribes will be managed according to the following schedule:

Upriver Sockeye

Run Size	Harvest Rate
<5O,000	5%
50,000-75,000	7%
>75,000	7%, with further discussion

All fishery impacts on sockeye will be included in the specified harvest rates.

If the upriver sockeye run is projected to exceed 75,000 adults over Bonneville Dam then any party may propose harvest rates exceeding the aforementioned harvest rates. Parties shall prepare a revised Biological Assessment of proposed Columbia River fishery impacts on ESA-listed sockeye and shall submit the Biological Assessment to the NMFS for consultation under Section 7 of the ESA.

Non-Indian Allocation of Upriver Impacts

The Interim Management Agreement provides a sliding scale exploitation rate for upriver spring chinook which ranges from 0.5% to 2.0% for non-Indian sport and commercial fisheries. A policy decision concerning the allocation of non-Indian upriver spring chinook impacts between sport and commercial fisheries is required for 2002 and beyond. As part of the decision making process the Oregon and Washington Departments of Fish and Wildlife have asked their respective Commissions to provide policy guidance to their respective Director regarding mainstem Columbia River fisheries management with the intent of providing a basis for resolving the non-Indian sport/commercial allocation issue in the Columbia River Compact forum. Final policy guidance occurred at the December 7-8, 2001 WFWC meeting and at the December 14, 2001 OFWC meeting where both Commissions endorsed the staff recommendations concerning the non-Indian sport/commercial allocation issue. The following guiding principles and fisheries management objectives were supported with the intention of providing staff with guidance when shaping fisheries preseason and managing fisheries inseason and will be

in effect for two years, 2002-2003.

Based on the aforementioned guiding principles and fishery objectives staff developed a 3 x 3 matrix for the sharing of allowable non-Indian upriver spring chinook impacts between sport and commercial fisheries. The matrix allocates impacts based on upriver and Willamette run sizes in recognition of the fact that as both run sizes change the ability to meet the needs of both fisheries also changes. The following matrix, endorsed by both Commissions, provides a high likelihood of achieving the sport fishery needs under most run sizes and a high to moderate likelihood of meeting the commercial fishery needs under most run sizes while the associated footnotes provide management flexibility necessary for making inseason fishery management decisions.

Lower Columbia River Sturgeon Management

In October 1996, the directors of ODFW and WDFW signed "The Olympia Accord on Columbia River Sturgeon Fishery Management". Major tenets of the Management Agreement for lower Columbia fisheries guided white sturgeon fishery management decisions during 1997-1999. During the late fall and winter of 1999, the Oregon and Washington Fish and Wildlife Commissions re-evaluated the major tenets of The Olympia Accord, especially the harvestable number and the sport/commercial allocation. These discussions culminated in February 2000 when the Directors of ODFW and WDFW signed a 3year Joint State Management Agreement concerning sturgeon management for 2000-2002. A new harvestable number of 50,000, down from 67,300 in the previous Accord, was adopted but other major tenets of the previous Accord remained intact, including the 80% sport:20% commercial catch allocation. The major tenets of this Joint State Agreement are described in "The Joint Staff Report Concerning Commercial Seasons for Sturgeon and Smelt in 2002 ".

The current Joint State Sturgeon Agreement calls for an average annual harvestable number of 50,000 white sturgeon (40,000 sport and 10,000 commercial) which equates to a 3-year total of 150,000 white sturgeon (120,000 sport and 30,000 commercial). With 2002 being the final year of the Joint State 3-year agreement, landings during 2000 and 2001 sport and commercial fisheries in excess of the respective guidelines will be applied to the 2002 catch guideline. Additionally, the Joint State Agreement allows for changes to the harvestable number based on new data collected during the period of the agreement. Population estimates for 1999 and 2000 indicate that the population of 4-6' white

The Willamette spring chinook run will be more than 20 percent larger than expected, the highest number of springers in the river in more than a decade.

"It will be at least 90,000," said Steve King, the department's harvest manager. "And there are more still in the lower river. Water temperatures are low and fish should keep coming well past Memorial Day."

The river's preseason prediction was 74,000 fish, but King said the showing of four-year-old hatchery salmon has been stronger than expected.

The record Willamette run was 131,000 fish in 1990, followed by 110,000 In 1991. This year's run will be the highest since 1991, King said. Anglers have kept 9,500 hatchery fish. The rate of fin-clipped fish has been 76 percent and is rising with the late arriving hatchery four-year-olds, King said. The number of four-year-olds suggest next year's run also will be a strong one, King said. The Willamette run is typically dominated by four- and five-year old fish.

sturgeon has not increased as expected; therefore, conservative fishery management is appropriate during the final year of this agreement. With this in mind the Compact adopted the following protocol for determining white sturgeon catch guidelines in 2002 at the December 12, 2001 Compact hearing.

• Overages during 2000 and 2001 will be applied to currently adopted 2002 catch guidelines.

• Sport and commercial fisheries will be managed to less than the maximum catch guideline for 2002 as a management buffer. Reduction will be 2,000 for sport and 500 for commercial.

• Based on the December 12, 2001 catch update 2002 sport fisheries would be managed for a catch target of 36,500 not to exceed 38,500 and commercial fisheries would be managed for a catch target of 9,200 not to exceed 9,700.

• 2002 catch guidelines may be further modified as 2001 catches are updated.

2001 WINTER, SPRING, AND SUMMER SEASON RECOMMENDATIONS

Fisheries considered in this report will be managed in accordance with the "Interim Management Agreement for Upriver Spring Chinook, Summer Chinook, and Sockeye ". A sliding scale harvest matrix is in effect for upriver spring chinook. Based on the aforementioned matrix and a river mouth run size forecast of 333,700 upriver spring chinook, the total harvest rate on Snake River wild spring chinook will be 14% with 2% allocated to non-Indian fisheries and 12% allocated to treaty Indian fisheries. In 2002 non-Indian fisheries will include selective sport and commercial spring chinook fisheries where the release of non-adipose fin-clipped chinook will be required, in accordance with the Willamette spring chinook FMEP. Release mortality impacts will be estimated and monitored inseason to ensure that impacts do not exceed 2% of the upriver spring chinook run. Summer chinook impacts are not to exceed 1% in non-Indian fisheries and 5% in treaty Indian fisheries. Impacts to listed sockeye will vary depending on run size which will be updated inseason.

Recognizing the complexities of managing a mixed stock fishery, the Compact will have to be cautious and creative in shaping and adopting 2002 seasons that minimize impacts on listed and depressed runs. Potential main-stem Columbia River commercial fisheries for the 2002 winter, spring, and summer season time frame listed here will be considered at the January 31, 2002 Compact hearing. Ongoing or other potential fisheries will be considered at future Compact hearings and other management forums.

2002 Non-Indian Fishery Recommendations

Commercial Winter Sturgeon Fishery (adopted December 12, 2001 and Compact consideration January 31, 2002)

The currently adopted season consists of eight 30-hour fishing periods (noon Monday to 6 PM Tuesday and noon Thursday to 6 PM Friday) in all of Zones 1-5 during the time period of January 8, 2002 through February 1, 2002. Season dates, gear restrictions, and expected catches are listed in the document titled "Joint Staff Report Concerning Commercial Seasons for Sturgeon and Smelt in 2002."

Salmon run on upswing

By Tom Stienstra, 12/2002

A 14-fold increase in the numbers of endangered salmon the past five years has set off a ring of euphoria across California among the few who have learned of it.

The number of endangered winter-run king salmon in the Sacramento River has climbed from 800 in 1996 to 11,000 this year, where the fish have migrated from the Golden Gate to Red Bluff, then spawned and died.

If the increases continue, the winter-run salmon would be the first aquatic species in America delisted out of the 500 classified as endangered.

The winter-run salmon is one of four runs of salmon, with the healthy fall run providing sport and commercial fishing in the summer months along the Bay Area and Northern California coast. Due to the loss of spawning habitats by dams and warm water released into the Sacramento River in the summer, the winter-run salmon population has fallen as low as 189 in 1994.

That has suddenly changed. Scientists credit a $100 million project at Shasta Dam devised to release cold, oxygenated water into the Sacramento River that allows large numbers of juvenile fish to survive the hot summer. Continued increases in salmon numbers likely would mean an extended fishing season next year.

Horse Seining Memories...

By Clara Miles

Seining for Salmon on the Columbia River

Horse seining was a good way of life for the many people who were involved in its operation. It was a method of fishing used on the Columbia River for 80 years.

Horse seining was a unique and picturesque form of fishing as well as a tourist attraction. Visitors could go on one of the Cannery boats to visit the site where horses and men waded in water to bring in the nets, and then enjoy a meal at the cook house. Photographers from Pathe, Universal and other Hollywood studios came to take pictures and make films of the activities. Seining operations were featured in news reels and travel films.

My husband, Roscoe Miles, operated the grounds called Kabath Sands for 17 wonderful years. Preparation for the season meant packing clothes, bedding and personal items for our trip to Kabath Sands where we would spend the next seven months. The company launch was tied up to our houseboat for convenient loading. The year was 1933.

A seining ground is a sand bar that emerges at low tide. Kabath Sands emerged over a mile in length and was situated in the middle of the Columbia River opposite Knappa on the Oregon side, and a place called Dahlia on the Washington side. The buildings consisted of a kitchen, dining room, store room, cold room and bedrooms for the cooks plus a bunkhouse for the crew. A barn and slip for the horses was built on pilings a distance away from the other buildings and connected by a walkway. In addition, there was a space or net rack where the nets were stretched for mending. A power plant gave us electricity.

We went to the seining ground in mid-April with a small crew of five or six men to clear the drift of snags. This was done by dragging a cable over the area where the net would drift. If a snag couldn't be loosened by boat, a commercial diver was hired. The diver had a man who attended him, keeping his lifeline of oxygen and other lines free. This assistant knew every signal the diver gave him and did whatever was needed. I had my work cut out for me getting the cookhouse in readiness by May 1 when the season opened.

Across the channel was a fish receiving scow where the company boat, called the Cannery Tender, stopped every day bringing supplies, mail and ice. The Tender also took the fish, which was weighed, boxed and covered with ice, to the cannery.

The nets were tanned in a large tank filled with a solution of bark and hot water. This procedure was effective in preserving the nets which were made of cotton twine. The men wore waders that reached to their arms. The horses were brought to the grounds on a scow from Ilwaco.

Seining was done only when the outgoing tide was low enough to allow horses and men to walk on the sand bar. The tide changed about an hour every day as the depth and current of the water changed with each tide. These effects had to be considered so Roscoe referred to the barometer as well as the clock. At last, all was in readiness for the rest of the crew which totaled about 25 men.

When fishing the full tide (or single tide), our day started at 3 am. After a big breakfast the launchmen and skiff captain went out first to lay the nets out in a half-moon formation. As the net drifted slowly, the skinners harnessed their horses and attached them to double trees in preparation for the catch. When the time came to bring the full nets in, the skiff crew and skinners (some riding double trees) rigged the horse teams to pull the nets in on the sand where the fish were then put in a boat called the Slimy.

When the crew was through fishing the single tide, they were through fishing for

the day. Some enjoyed a quick dip in the river before the big meal was served for all the hungry men.

Roscoe liked to promote recreation for the boys during the single tides, one of the favorites being baseball. After the meal the boys rested while the cooks did the dishes, then off to the field at old Knappa grade school. The skiff crew would challenge the teamsters or sometimes play a team from Jim Crow Sands or Dahlia residents. Sometimes we went scavenger hunting on the big sand bar or berry picking for pies in Dahlia or on a nearby island.

Humor and good nature were physical requirements in a crew that was confined to a small area as the seining ground. Fred Hjorten, being that kind of a person, played the harmonica walking down the beach, and in the bunkhouse played the accordion. "Oh no" some would say, "not that again," but Fred smiled and kept playing, taking all the teasing good-naturedly.

Another good-natured boy, Wallace Moe, came out from my home town in Minnesota to work on the seining grounds. Wally was the best skinner we had, handling the horses so as to get maximum work out of them. He loved horses and loved the association with the crew, but he had a hard time getting up in the morning, always the last to come in for breakfast

One year a fierce earthquake hit the seining ground; the buildings shook, the horses fell over yet Wally slept right through.

The summer season ended August 25 and the fall season opened September 10, allowing an escapement period for the salmon to reach their various spawning grounds. In the fall we fished on shares which meant we paid all the expenses and shared the profits.

The season was an enjoyable time as we fished late into the fall until the days grew so short it was no longer feasible to fish.

The next summer I was relieved of my duties as cook and was invited to stay with friends and relatives while I awaited the birth of our first child, Clara Maureen on July 25, 1934. When Maureen reached school age, my cooking days were over. Roscoe converted our old wood shed built on logs into a two-room house. A neighbor wall-papered it and with a little paint it became our summer home. We towed it up to the grounds every spring when school was out. Maureen's days were spent swimming, riding double trees and playing in the sand. In time, we had two more girls, Joy and Mary Carol.

There was a constant fight with the Oregon State Legislature to keep seining in operation. The Isaac Walton League and other sports fishing groups had pressured to eliminate commercial fishing from the Columbia River. Roscoe and other seining ground foremen went to Salem almost every session to meet with legislators to plead for sustaining their seining operations.

Seiners, who were in the minority, formed an association and invited the gillnet fishermen to join them. The gillnetters refused and instead joined with the sportsmen in their effort to eliminate seines and traps. Consequently, a bill was put on the ballot and approved by voters. A study by a group of biologists stated that hydroelectric projects had drastically affected the salmon runs, not the seiners.

In 1950 our son Ross was born. This was also the last year we were able to seine on the Columbia: River, the year that horse seining became a lost way of life.

(Clara Miles passed away on October 30, 2001 in Woodland, WA)

Shellfish Poaching Ring Busted

Fisherman's News, 4/2002

Five Washington residents arrested for operating geoduck and crab poaching ring in Puget Sound

A Pierce County, Washington, man has been arrested as the suspected leader of a geoduck clam and crab poaching ring that over the past 18 months distributed what could be up to $3 million worth of illegally harvested shellfish to markets throughout the United States and overseas.

Douglas John Martin Tobin, 49, of Fife, Washington, and four other south Puget Sound area residents were arrested early on the morning of March 18th by Washington Department of Fish and Wildlife (WDFW) detectives and officers.

The arrests come at the end of an 18-month investigation by WDFW, the State Department of Natural Resources (DNR), and the Pierce County Sheriff's Office, during which enforcement officers gathered evidence of the extent of the illegal shellfish harvesting and selling operation. Additional arrests and charges are expected with the assistance of the Fife Police Department and the U.S. Coast Guard.

"This is certainly one of the largest organized poaching cases that our agency has investigated in recent memory," said WDFW Director Jeff Koenings. "While criminal offenses involving the state's natural resources might not be as high profile as other crimes, these are serious charges and simply cannot go unpunished," Koenings said.

"These arrests will help protect a resource which provides millions of

dollars every year to the state to fund access to recreation and habitat restoration along shorelines and rivers," said Commissioner of Public Lands Doug Sutherland.

"This was a joint effort, and we appreciate the work of WDFW and Pierce County. We are always coordinating with WDFW, the Department of Health, counties and tribal fisheries, to closely monitor state lands and severely punish poachers."

Tobin was booked on suspicion of a number of felony charges, including leading organized crime, trafficking in stolen property, first-degree theft and unlawful commercial fishing in closed waters.

Confiscated from a Fife shellfish processing plant in conjunction with the arrests were approximately 1,500 pounds of geoduck with an estimated market value of about $20,000. A large amount of Dungeness crab was seized at the Fife plant as well. Tobin's 42-foot commercial fishing boat, Typhoon, and a 17-foot skiff, six vehicles and three rifles were also confiscated in conjunction with the arrests.

Bjork said agency detectives and officers, working on an anonymous tip, began an undercover investigation of Tobin's illicit shellfish harvesting in 2000. The harvests, which always occurred at night, were conducted at several locations throughout southern Puget Sound.

Bjork said the poachers harvested the deepwater clams and crab under the cover of darkness, transferring the shellfish in crates and plastic garbage cans to a Fife processing plant, where they were packed and trucked to Seattle-Tacoma International Airport. From there, the clams were airfreighted throughout the United States and Asia.

Geoduck is a highly prized delicacy, commanding up to $100 per pound in some markets.

continues from page 1
who had come from Portland hoping to buy chinook. "We're not able to get them off the platforms."

As the summer run continues, latest escapement at Bonneville is approaching 150,000.

[Editor's note: The "real" June "hogs" used to travel past where Coulee Dam is now located. As there are no fish ladders at Coulee, that run is now extinct. A quote from the head of the Corps of Engineers in 1941 helps explain: "I haven't got time to play nurse-maid to a bunch of fish".]

Willamette River run returns are coming on strong

On July 10, 2002, 100,711 salmon have returned to the system. This compares to about 52,000 last year.

Sturgeon Fishing at Astoria.

Recent catches, over the 4th of July weekend, have been tremendous and while the numbers are not in yet, we expect this to be a great season for sturgeon. Fisherman were limiting out in the river across from Astoria, and from the shore, it looked like there were thousands of boats fishing.

DID YOU KNOW? WHAT CAUSES THE RED TIDE?

The red tide and its effects on fish have been known since Biblical Times. Dr. Harris B. Stewart, Jr., Director of the Institute for Oceanography of the Environmental Science Services Administration, says that probably this particular phenomenon had occurred in the lower Nile and is recorded in the Bible in the seventh chapter of Exodus "...and all the waters that were in the river were turned to blood, and the fish that were in the river died; and the river stank, and the Egyptians could not drink the waters of the river."

A red tide, with its mass fish kill, occurs when the following two conditions exist: (1) physical factors are favorable to the rapid reproduction of dinoflagellates (Gymnodinium), and (2) the number of predators is temporarily reduced. Dinoflagellates are one celled organisms with characteristics of both plants and animals. Although less than a thousandth of an inch in size, they reproduce so rapidly that a quart of sea water may contain 100 million.

Millions of fish may be killed during such a plankton "bloom."

A Wave Goodbye

Celebrated Astorian Graham Barbey dies

Heir to a fish-canning concern, he made salmon an upscale commodity in New York and Boston

Graham John Barbey, who took the family's fish packing business in Astoria and found a niche for Columbia River salmon in New York and Boston, died Sunday in Palm Springs, Calif. He was 82.

Friends and colleagues remembered Mr. Barbey as an enthusiastic man with a passion for the Columbia River and as one of Astoria's distinguished residents.

"The name Barbey is woven into the fabric of Astoria, and we're going to miss him," said Jerry Ostermiller, executive director of the Columbia River Maritime Museum.

Mr. Barbey joined the original board of trustees at the museum 40 years ago. He most recently assisted the museum in a $5 million renovation that nears completion.

Mr. Barbey's family came to Clatsop County in 1919 when his father, Henry, moved the family business, Barbey Packing Corp., from Portland to the former town of Flavel, near Warrenton. The business moved once again, in 1926, to Astoria.

Bob Lovell, a family friend, remembers the Barbey company as a maverick during an era in Astoria's history when canneries lined the town's shoreline. Lovell recalls Henry Barbey outbidding the powerful Columbia River Packer's Association for rights to seine fish with horses on Sand Island.

Graham Barbey took control of the family business in 1948 when his father named him president. Lovell said Graham Barbey built on his father's success by packaging a premium quality of salmon and marketing it to the wealthy of New York and Boston.

"Graham shifted the canneries' focus to some extent," Lovell said.

Mr. Barbey left behind a tribute to the family business and his father when he collaborated with author Roger Tetlow to publish "Barbey The story of a Pioneer Columbia River Salmon Packer" (Binford & Mort, 2001). The book chronicles the rise of the Barbey business, but also provides commentary on the decline of the salmon runs that once filled the Columbia River.

Portlander Henry Houser said Graham Barbey's ability to manage the family business and pursue new markets is a testament to his organizational strengths. Houser met Mr. Barbey when the two were freshman entering Stanford University in 1937. Houser said Mr. Barbey was an accomplished storyteller, prone to hyperbole in the pursuit of laughs.

"He was very affable and made friends easily," Houser said. Mr. Barbey also owned the Barbey Investment Co., was vice president of the Murray Pacific Corp. in Portland, and served as director and chairman of the Portland branch of the Federal Reserve Bank of San Francisco. He was a member of Sigma Chi fraternity and the Stanford University Alumni Association.

Mr. Barbey is survived by his wife, Anne; two daughters, Anita Barbey Liebow and Helena Barbey Lankton; and three grandchildren.

"Graham Barbey was certainly a devoted Oregonian and very interested in the progress of Astoria and the maritime museum," said longtime friend Gerry Frank. "He was the sort of person who brought a lot of pleasure and~enjoyment to the people around him."

— By Jonathan Nelson

Richard Allen Riutta

Commercial Fisherman

Richard Allen Riutta, a lifelong resident of Astoria, Oregon, passed away early Wednesday morning, May 1, at Hopewell House Hospice Center in Portland, Oregon. Born to John and Ida Riutta in Astoria, Richard grew up amongst numerous brothers and sisters in the Uniontown area of Astoria.

A commercial fisherman by trade, Richard worked both the lower Columbia River and Bristol Bay, Alaska. On land, Richard originally worked at Lovell Auto. After years of work repairing and painting cars, he struck up a partnership with Albert Sorkki and bought Astoria Auto Parts (Napa). In the mid 1980s, he and his wife Rayona, formed a partnership with John Supple to purchase the remaining assets of Bumble Bee Seafoods and established Astoria Warehousing. It was from this business that he retired. However, despite all the businesses he helped to establish through the years, he always considered himself first and foremost a commercial fisherman, and was proud to be a long standing member of the Uniontown Supreme Court.

Richard is survived by Rayona, his wife of 45 years. Their only son, John, along with his wife Polly and their daughter Elizabeth, reside in Scappoose, Oregon. Also surviving is his sister Jeannette Riutta of Nehalem, Oregon, and two of his brothers, Eli Riutta of Astoria and Irvin Riutta of Seattle, Washington. Sisters Sylvia Nelson and Dolores Riutta, and brothers Ed, Ernie, Emil, Gilbert, and Roger preceded him in death.

Sylvia Susanna Jolma

Lifetime Clatskanie resident

Sylvia Susanna Jolma,91, a lifetime Clatskanie resident, died Tuesday, April 23, 2002, in Longview, Wash.

Mrs. Jolma was born in Clatskanie to Antti and Susanna Putaansuu Jurvakainen. She attended Quincy School.

She married Leino Bakko May 21, 1931. He died in 1943.

She married Oscar Dixon April 20, 1945. He died earlier.
She married Japhet Jolma Jul, 26, 1971. He died in 1986.

Mrs. Jolma worked at J.C. Penny in Clatskanie for several years and for Paul's Department Store in Clatskanie for about five years.

She was a member of the United Methodist Church and the United Finnish Kolleva Brothers and Sisters, where she served as treasurer for many years.

Mrs. Jolma enjoyed crocheting and knitting afghans and doilies and playing pinochle.

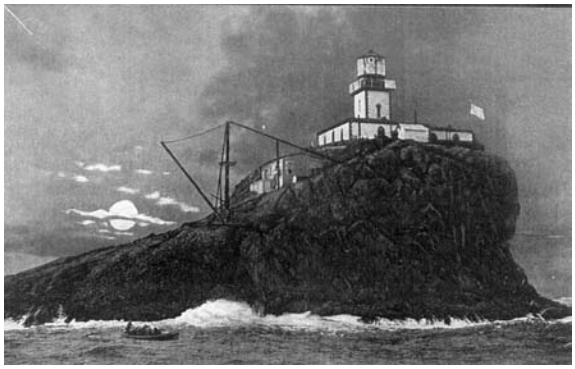
She is survived by two sons, Donald Bakko Sr. of Longview, Wash., and Richard Bakko of Clatskanie; a stepson, Kari Jolma of Kotzebue, Alaska; two sisters, Betty Ollila and Helen Freiburger, both of Longview; a brother, Arne Jurvakainen of Longview; 10 grandchildren; seven great-grandchildren; and a great-great-grandson. Her brother, Wally Jurvakainen, died this year.

Henry A. 'Hank' Coles

Tug boat skipper

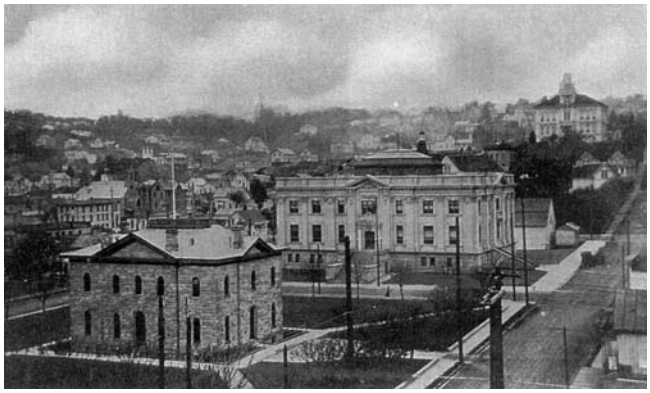
Henry A. "Hank" Coles, 77, formerly of Astoria, died Tuesday, April 23, 2002, in Gresham.
Mr. Coles was bon Feb. 28, 1925 in Astoria to Henry and Selma Coles.
After graduating from Astoria High School, he served as a B-42 gunner with the U.S. Air Force in the Pacific Theater during World War II. After the war, he returned to Astoria and worked for his father at the seining grounds.
He married Audrey Lundell in Astoria March 5, 1949. She survives, living in Portland.
Mr. Coles worked as a fisherman, a commercial clammer and for Larsen Construction on tug boats. In 1954, he was the sole survivor of an accident at Bonneville Dam. He moved to Portland in 1954, and worked for Ross Island Sand & Gravel and later for General Construction Company as a tug boat skipper, retiring in 1987.
He enjoyed fishing, camping, clam digging, traveling and spending time at the coast. He was a member of the American Legion Post No. 12 in Astoria and Veterans of Foreign Wars.
In addition to his wife, he is survived by his son, Steven Coles of Oregon City; two daughters, Sheila Scheffer of Boring and Sandra Pense of Estacada; two sisters, Maxine Pietila of Astoria and Marion Poole of Vancouver, Wash.; six grandchildren; and five great-grandchildren.

Astoria Salmon Cannery, 1900



Tillamook Lighthouse

Cannery Workers at Pillar Rock



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