



rising tide

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FALL 2008



Low salmon returns cause GRIZZLY TRAGEDY

Grizzly bears in the Broughton Archipelago are starving due to collapsing pink salmon runs in the Glendale River. Tourism operators report that the bears are turning over rocks looking for snails and tiny eels to eat at a time when they need to be gorging on spawning salmon in order to survive the long winter.

Fisheries and Oceans Canada (DFO) is estimating that only 10,000-12,000 pink salmon will return to spawn in the Glendale this year, a drastic drop from the last even-year cycle of an estimated 182,000. The runs have peaked so although more salmon could appear this fall, there will not be a great number of them.

As a result the local grizzly populations of the Broughton Archipelago may plummet. The lack of salmon for the bears is catastrophic at this time of year when they should be filling up on the high protein fish in order to put on enough fat before hibernation. Undernourished cubs may not survive the winter. Pregnant females will not be able to sustain their unborn cubs throughout hibernation and will likely miscarry; starving adult males have been known to eat grizzly cubs.

Although there are many reasons that salmon returns are down, much of the problem in the Broughton is due to the sea lice that proliferate on the region's many salmon farms. A high concentration of B.C.'s 100 active salmon farms are clustered in the archipelago's sheltered inlets fed by wild salmon rivers. Juvenile

salmon migrating out to the ocean from their birth streams are obliged to run a gauntlet through the sea lice, disease outbreaks and contaminants that accumulate in and around the open net cage farms.

Reports in peer reviewed scientific journals have found that as many as 97 percent of the juvenile wild salmon that pass through the Broughton die as a direct result of the farms' parasites. As night follows day, the number of returning salmon to the Broughton has plummeted. A study published in the esteemed journal "Science" estimates pink salmon in the Broughton may be extinct within four years if nothing is done to address the impacts of the industrial fish farms.

Returns the lowest in 25 years

Craig Murray, owner of Nimmo Bay Resort, has fished and flown over the rivers of the Broughton for the past 25 years and said this is the poorest year he has ever seen for salmon returns.

"In B.C. both levels of government refuse to accept that salmon farms, as they currently operate, are causing irreparable damage to our wild salmon stocks," Murray said. "Effectively following farms and closed containment of the Atlantic salmon are solutions that should be in place now."

Tour operators take their customers to the Glendale River where they are assured of seeing grizzlies. Over the past several years grizzly bears have learned to gather at the Glendale because of the high number of salmon returning to the river's artificial spawning channel.

As the Broughton's wild salmon runs collapse, DFO has "managed" the numbers to provide false assurances to concerned British Columbians that all is well and sea lice are not having a devastating impact. DFO counts the salmon returning to five "indicator" streams in the Broughton

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In 2004 the B.C. government estimated that there were 186 grizzlies in the Knight-Butte Inlet region.



PHOTO: ©J.C. Brouwer



Letter from the Executive Director

In the 1990s things were different in B.C. The logging protests in Clayoquot Sound and the Great Bear Rainforest dominated both the headlines and the environmental agenda. Most people could not see the waves through the trees and little attention was paid to the conservation of our oceans.

But 10 years ago things began to change. The coho crisis erupted and the management of British Columbia's salmon stocks was called into question. Nationally, the *Oceans Act* was passed, giving Fisheries and Oceans Canada a stronger mandate to conserve the health of the ocean. And in the tiny fishing community of Sointula on Malcolm Island on the Central Coast of B.C., Living Oceans Society was born.

My vision was to create an organization where passion for the ocean fueled creative solutions, bold tactics and innovative strategies. This was based upon my belief that people are part of the environment and that we must sustain the health of our seas to sustain our coastal communities. I did not know if we would be big or small, loud or quiet, dramatic or subtle but I did hope that others would join me in this effort.

They did. In the early days I relied on friends, family and a handful of funders to help fulfill my dream. Over the past 10 years I have been joined by an amazing team of skilled people who have worked through long days and hard times to deliver innovative and effective conservation

campaigns and programs. At the same time, generous individuals and foundations have provided us with the resources we need to make change happen.

The change over the past decade has been profound. In the 1990s everyone knew that the forests were being clear cut, but not many had heard of the devastation of the sea bed by bottom trawling. Now, 10 years later, people across the country are increasingly aware that the ocean provides the air we breathe, the food we eat, and contributes to our economy. From Sointula to St. Johns, people know that the way we manage our oceans in changing and that Living Oceans is leading the charge.

Creating change requires a variety of approaches and tactics and as a result, our work will sometimes be dramatic and sometimes subtle and we will be loud when we need to be, quiet when we can. While our efforts may take different forms, we promise that we will continue to dream big and harness our passion to make those dreams become reality. I hope you will stay with us for the next chapter of this extraordinary journey.

Thank you for 10 years of support.

Sincerely,

Jennifer Lash
Executive Director



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sign up online at www.livingoceans.org/newsletters/

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PO Box 320 Sointula, BC Canda V0N 3E0

Living Oceans Society is working to ensure the long-term health of the ocean and coastal communities on the Pacific Coast of Canada. We believe that people are part of the environment and that we can build sustainable communities by protecting coastal ecosystems today.

EDITOR: Geoff Gilliard. **CONTRIBUTORS:** Jennifer Lash, Catherine Stewart, Kate Willis Ladell, Vern Sampson, Karin Bodtker, Carrie Robb, James Gates, John Driscoll, and Geoff Gilliard. **LAYOUT AND DESIGN:** Beyond Expectations Communication & Design Solutions. **COPYRIGHT:** Living Oceans Society, 2008. Rising Tides is published twice annually.

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Take *action!*

Sea lice kill grizzlies too

Sea-lice from open net cage fish farms are killing B.C.'s out migrating juvenile salmon causing the coastal ecosystem to unravel.

Write Finance Minister Colin Hansen and urge the B.C. Government to:

- enact emergency interim measures to save wild salmon
- invest immediately in the development of closed containment technology
- devise a transition plan to move the fish farm industry off the wild salmon migration routes and into more sustainable closed tanks

The impacts of open net-cage aquaculture are cause for growing concern amongst B.C. citizens. A March, 2007 poll found that over 80 percent of British Columbians would support a transition from current open net-cage practices to closed containment. In B.C. there is growing awareness in business and financial circles that in order to maintain long term economic competitiveness, industries must not allow the negative costs of their operations to be borne by society or the environment.●



3 ways to ACT NOW to get B.C. Finance Minister Colin Hansen's attention:

- 1 Go to www.livingoceans.org; click on **Take Action** to send a pre-written email
- 2 Write a letter. Send it to:
Hon. Colin Hansen
Room 153
Parliament Buildings
Victoria, BC V8V 1X4
(postage required)
- 3 E-mail colin.hansen.mla@leg.bc.ca

Grizzly Tragedy continued

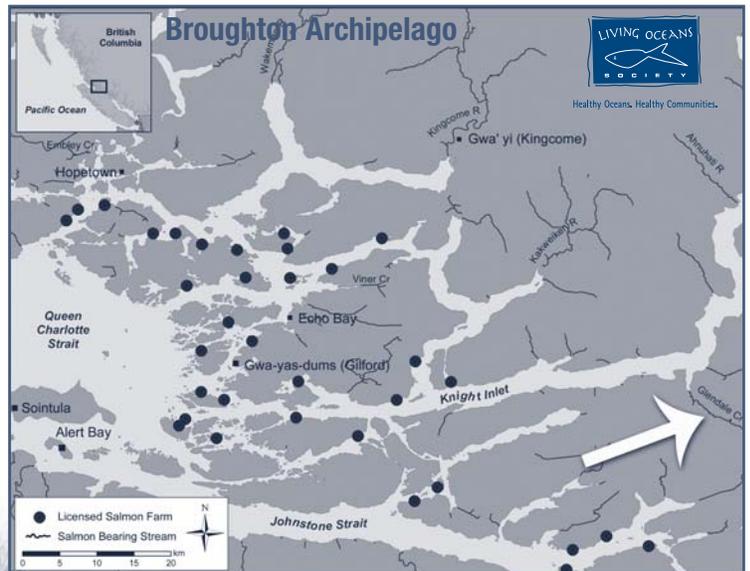
(Glendale, Wakeman, Kakweikan, Kingcome and Ahnuhati) and uses the numbers to indicate the overall health of salmon populations in the area. Up to 85 percent of the total returns are generally from one river – the Glendale. This practice of using cumulative data from indicator rivers for the area as a whole has helped DFO to mask the decline of Broughton stocks in other unaltered streams near salmon farms that have already lost most of their wild salmon. Now even their 'indicator' stocks are crashing.

Closed containment can save more than wild salmon

If salmon farms were mandated to switch from open net-cages to closed containment systems the whole ecosystem would benefit.

Salmon feed more than grizzly bears; they are the life blood of the entire rainforest. Eagles, coastal wolves and myriad insects depend on the wild salmon for survival. Even the ancient cedar and spruce depend on salmon. Dr. Tom Reimchen, a biologist at the University of Victoria, has found that spawning salmon pulled from the rivers and streams by bears and other predators feed the forest. The bears drag their high protein prey into the woods to dine. There, uneaten salmon carcasses decompose, fertilizing the trees and fuelling the circle of life. But this year the circle is running out of fuel.

Dean Wyatt, owner of Knight Inlet Lodge located in Glendale Cove, is concerned that whole coastal valleys are losing wildlife due to the lack of salmon. "If the wildlife go, then so does the \$1.4 billion nature based tourism industry," said Wyatt.●



ABOVE: DFO's method of counting returning salmon in a few 'indicator rivers' like the Glendale (see arrow) helps the department mask the abysmal returns to dozens of smaller salmon bearing streams in the Broughton.

LEFT: Over the past several years, grizzly bears have learned to gather at the Glendale because of the high number of salmon returning to the river's artificial spawning channel.



Local Ecological Knowledge Project

Understanding of the ocean and its bounty is passed down through generations in aboriginal communities or earned through a lifetime of living and working in the same places: valuable fishing spots, the best beaches to gather shellfish, where herring spawn. This hard won experience and intimate understanding of the environment is known as “local ecological knowledge” (LEK). Living Oceans Society believes LEK is valuable and can be used to inform inclusive marine planning processes. We also use this knowledge in our science-based approach to designing a network of marine protected areas (MPAs).

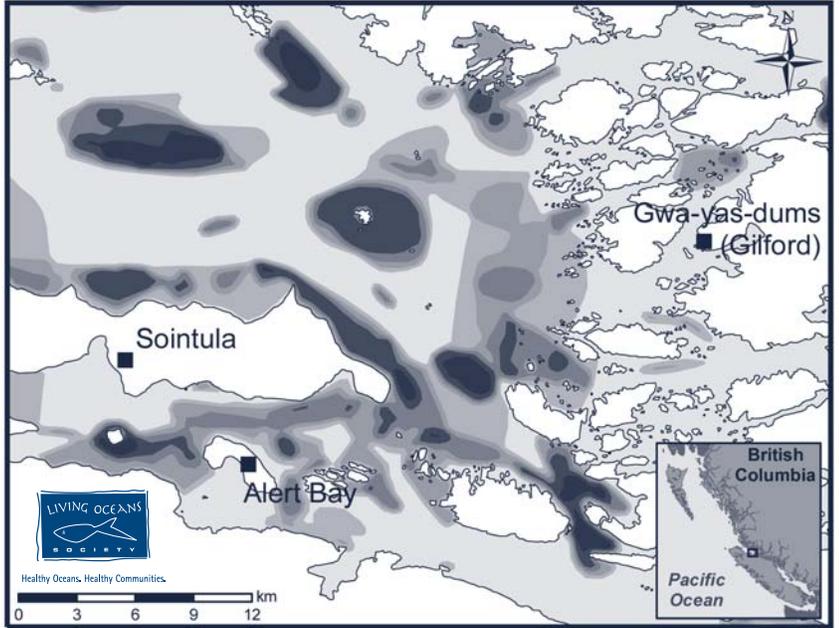
Since 2007 Living Oceans Society’s LEK Project Coordinator Vern Sampson has been travelling throughout the North Island and Central Coast, speaking with fishermen and other coastal residents about the waters where they live and work. During the interviews Vern and the participants draw areas of value on nautical charts: where they used to catch salmon compared to now, where they’ve seen whales, the locations of eelgrass beds, places that should be parks or protected areas.

For MPAs to work, the people who live near the ocean and depend on it for their livelihood must have a say in where the protected areas are set up. Successful MPAs in other parts of the world have been created through consultation with communities and stakeholders. The alternative is always years of controversy and protest. In the design of MPAs, Living Oceans Society is seeking a balanced approach which takes into account areas where important ecological resources exist and areas that are important for peoples’ livelihoods. We need to map both.

“There’s an amazing number of commercial fishermen and other people living on the coast who are aware of the environmental problems we face and are prepared to change their fishing and harvesting methods to help the environment,” Vern says. “Most of the people I interview have been around the ocean for decades. The older ones have seen the changes and they can document them, which is quite valuable when you’re looking at the history of B.C. fisheries. Thirty years ago, they used to fish salmon from April to November, five days a week. Nowadays it’s a different story.”

The charts from Vern’s interviews are given to Living Oceans’ Marine Analyst Karin Bodtker and GIS Specialist Carrie Robb who arrange for all the hand-drawn data to be digitised, or put into the computer using mapping software. They analyze the information, combining data from many interviews to create a summary map for each theme, such as eelgrass beds, scuba diving sites, or areas important for commercial salmon fishing by gillnet. The process of summarizing allows us to identify the areas of greatest importance and combines the data so that no one can tell which sites were identified by which participants.

“There’s often a perception that because Living Oceans is involved in marine protected areas we want to shut everything down,” Vern explains. “If we have enough data from people in coastal communities I believe we can minimize overlap with high value fishing areas and reduce conflicts with MPAs.”



ABOVE: Dark areas are rated as places of high value by LEK Project participants. LEFT: Marine Analyst Karin Bodtker and GIS Specialist Carrie Robb create Living Oceans’ renowned maps. BELOW: LEK Project Coordinator Vern Sampson interviews coastal residents about the waters where they live and work.



Respecting confidentiality

In the maps we produce, areas of higher relative importance are those identified by several participants. Areas of importance are revealed but we do not post or distribute the maps without groundtruthing and approval by the contributors. No names are mentioned so there is no way to point out a person’s comments or data.

The finished maps are shared with the interviewees who can take them to MPA planning meetings to make their case.

To arrange a meeting to share your information contact Vern Sampson at 250-973-6580 or vsampson@livingoceans.org



For more information on our LEK program go to www.livingoceans.org/programs/marine_planning/lek

Union of B.C. Municipalities calls for PNCIMA planning



During our recent federal election the global economic system began to crumble. Providing a response plan to the crisis became the mantra for all the party leaders. While it remains to be seen what steps will effectively address the financial crisis, the fact remains that a plan is essential, especially in times of uncertainty.

A comprehensive marine plan for the coastal waters delineated in the Pacific North Coast Integrated Management Area (PNCIMA pronounced pin-SEE-mah) would increase economic certainty for communities and industries reliant on these waters. Such a plan would ensure better management of the resources we all care so much about. However, even though both the provincial and federal governments committed to a plan for PNCIMA, the process has never been adequately funded.

Realizing this, Living Oceans Society in collaboration with the David Suzuki Foundation and the Sierra Club of BC, put a resolution before the Union of B.C. Municipalities (UBCM) convention in September

regarding the need for governments to follow through on their commitment.

We are happy to report that the resolution was passed unanimously. Specifically, the resolution calls on the Governments of Canada and British Columbia to immediately commit to increased engagement and collaboration in PNCIMA. The passage of this resolution demonstrates widespread community-level support and demand for improved management of this productive and valuable ecosystem.

“Now that local communities and NGOs are formal and active supporters of an integrated marine planning process for PNCIMA, it’s time for the federal, provincial and First Nations governments to get the show on the road,” said Kate Willis Ladell, Living Oceans’ Marine Planning Campaign Manager.



You can read the resolution online at <http://coastalvoices.blogspot.com>

new staff



James Gates, Campaign Communications Coordinator, has followed his interests and love for British Columbia’s wild areas and spent several years working on wilderness preservation campaigns. He then got his degree in Forest Resources Management with the ideal of changing forest management practices as a Professional Forester. His work in forestry on North Vancouver Island provided him with an intense appreciation for British Columbia’s temperate forests, wet socks, and the difficulties facing B.C.’s resource

dependent coastal communities. Living on Northern Vancouver Island James explored the coast in a tipsy canoe with his wife and dog.

Deep interest in ecological matters led James to a serious involvement in yoga and then residency at Yasodhara Ashram where he put to work his writing and computer skills developed in a communications diploma program at Douglas College. At Living Oceans Society James provides communications support for the Marine Planning and Marine Protected Areas campaigns.



John Driscoll, Sustainable Fisheries Campaign Manager, came to the Sointula office from Halifax, Nova Scotia, where he earned his Master’s degree at Dalhousie University. He’s been a fisheries observer in Alaska and Maine, a teacher at a school for at-risk youth, and, for shorter periods, a biologist, a construction worker, and a salmon fisherman. A desire to understand why we humans do things in an unsustainable manner, and what can be done to change this, has driven John throughout his various work and

academic experiences. When not working, John loves hiking, general outdoors wandering, guitar, playing basketball and ultimate, eating great food, philosophizing about anything at hand, home-brewing beer and wine, and telling stories.



Roxanne Paul, Marine Protected Areas Campaigner, made her return migration to the rhythm of mainland Vancouver in September 2008 after a brief (10 year) hiatus to Victoria. While exploring the rugged coasts of Vancouver Island, she collected a B.Sc. in Geography and a M.Sc. in Geography/Environmental Studies (Co-op) at the University of Victoria. Roxanne’s love of the ocean is accompanied by a profound interest in learning about the myriad sea creatures and habitats that comprise the diverse marine and coastal

communities around us. Most accurately described as quirky, she enjoys kayaking and surfing as well as some land-based activities for fun and leisure. Roxanne has embarked on a mission with Living Oceans Society to advance the planning and implementation of critically important Marine Protected Areas on the Pacific coast.



Goodbye, Candace.

LOS would like to thank Candace Picco who recently wrapped up her contract as Sustainable Fisheries Researcher. During her year and a half with LOS, Candace worked on “How We Fish,” the first Canadian study to rank the impact of fishing gears on habitat and bycatch, to be published later this year. Candace also developed a love of groundfish, shared by few, but appreciated by the hundreds of groundfish species that inhabit B.C. waters. She applied this expertise to our SeaChoice program and helped us to analyze fisheries being considered for the Marine Stewardship Council certification process.

CREATURE FEATURE

Sea Otters

Sea otters are likely the cutest and best groomed of all B.C.'s coastal creatures. Adults spend about six hours a day preening themselves. Their drive to keep their fur perfectly clean is not due to vanity, but survival. Sea otters are the only marine mammals that don't have a insulating layer of blubber so they depend on their fur to keep warm in the icy cold of the North Pacific.

That amazing fur—the densest and most luxurious of all mammals—sparked a “soft gold” rush on the B.C. coast from the late 1700s (Captain James Cook traded for sea otter pelts when he visited Nootka Sound in 1778) until 1911 when an international ban on sea otter hunting saved the creatures from

extinction. By then one or two thousand remained from a world population of over one million. Sea otters were gone from the western Pacific except for Alaska waters and a small pocket off the coast of California.

Along the coast kelp forests started to disappear too, their stalks eaten away by sea urchin, one of the otters' favourite prey. Species diversity declined because kelp forests provide shelter for smaller species and juvenile fish which attract larger fish and mammals.

Between 1969 and 1972, 89 Alaskan sea otters were reintroduced to the west coast of Vancouver Island.



Today over 3,000 of their descendents range from Cape Scott to Tofino. The otters brought balance back to the coastal ecosystems as kelp forests returned. In 1989 another colony of 300 otters was found on Goose Island on the Central Coast. No one knows if the Goose Island otters are survivors of the original population or if they migrated from the transplanted Alaskan otters.

Today the greatest threat to B.C.'s sea otters is oil spills.

Even one teaspoon of oil can destroy the protective properties of a sea otter's fur, causing death by hypothermia. And because otters groom themselves by licking their fur, they swallow the oil which poisons them, causes organ failure and damages their eyes.



LEFT: A sea otter mother cradles her pups on her chest away from the cold water. As few as 25% of pups survive their first year.

PHOTO: Mike Baird.

TOP RIGHT: Sea otters are a keystone species—an indicator of coastal ecosystem health.

PHOTO: David Menke, US Fish and Wildlife Service



Letter from the Sustainable Fisheries Campaign Manager

My name is John Driscoll, and I'm the new Sustainable Fisheries Campaign Manager with LOS. When I took this job, my partner Emma and I drove with our dog and most of our worldly belongings, all in a fairly small pickup, across the continent from Halifax, Nova Scotia, to Sointula, B.C. It was a long, hot ride, but we didn't hesitate then and we are thrilled now – Sointula offers just the kind of quiet, outdoor-oriented lifestyle that we were both seeking.

I've been involved with fishing issues as a fisheries observer and as a graduate student at Dalhousie University, from which I earned a Master's of Environmental Studies. I've also done a small bit of salmon fishing in Alaska. From these experiences, I have learned that what is best for fish and fish habitat is also best, in the long term, for fishermen and fishing communities. Or, in other words: sustainable fishing communities require sustainable fisheries.

Sustainable fisheries maintain the four basic building blocks of any healthy ecosystem: habitat, food web relationships, species diversity and genetic diversity. Without all four building blocks, an ecosystem can't support fisheries.

Bottom trawling is the biggest fishery in B.C., by volume. And it is extremely damaging to the four ecosystem building blocks. Bottom trawling has been likened to cutting down the forest—and everything in it—to catch the squirrels. This is what's happening to B.C.'s cold water corals and sponges.

B.C. has the world's only known Hexactinellid sponge reefs, a deep sea species that was discovered only 10 years ago and may be up to 9,000 years old. Through the efforts of Living Oceans Society and others, these ancient sponges are now protected from bottom trawling in four areas of B.C.'s coastal waters.

Unfortunately, B.C.'s equally unique deep sea coral forests, which are important habitat for numerous commercial species, are currently not protected at all. One single pass of a bottom trawl can damage a coral forest for centuries.

I am very happy to have the opportunity to join the Sustainable Fisheries Campaign as we pursue our twin goals:

- encourage government and industry to shift to less-damaging fishing gear and away from destructive fishing practices, most notably bottom trawling;
- identify areas of high conservation value and secure their protection.

I look forward to working with all of Living Oceans Society's friends in order to make both a reality.

Sincerely,



Support Living Oceans Society

YES!

1 Donate directly to Living Oceans Society, (if you do not require a tax receipt).

By cheque: Please make cheque payable to Living Oceans Society and mail to: Living Oceans Society Box 320 Sointula, BC V0N 3E0.

By credit card: Please call 250-973-6580 and provide us with your information.

2 Donate to Oceans Fund at Tides Canada Foundation if you would like a tax receipt (min \$50).

By cheque or credit card: please fill out this form. Cheques must be payable to TIDES CANADA FOUNDATION-OCEANS FUND. Please note if you would like to make a one time or monthly donation. Monthly donors will receive annual tax receipts.

Online: www.livingoceans.org/donate.

The Oceans Fund is a special fund set up at Tides Canada Foundation to support the charitable work of Living Oceans Society. Tax receipts will be issued by Tides Canada Foundation within six weeks of receipt. For more information about Tides Canada Foundation visit www.tidescanada.org.

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Thank you for supporting the work of Living Oceans Society. A charitable tax receipt will be sent to you for donations of \$50 or more. Tides Canada is a registered Canadian charity: BN 86894 7797 RR0001. **Please return this form to:** Tides Canada Foundation, 680-220 Cambie St, Vancouver BC, V6B 2M9.

Questions? Please call Living Oceans Society at 250-973-6580.



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