

NEWS FROM THE...

Salmon Coast | Field Station

SUMMER
2011

VOLUME ONE.
ISSUE TWO.



2011 RESEARCH

Mar – July

BAMP (Broughton Archipelago Management Plan) sea-lice monitoring project: Collaboration between independent scientists, government, and industry professionals to monitor sea-lice abundance on wild and farmed salmon in the Broughton Archipelago

Mar – June

Zooplankton project: A study on the relationship of zooplankton population dynamics, and early juvenile pink and chum salmon survivorship in the Broughton; a collaboration between SCFSS and the Department of Fisheries and Oceans.

Mar – June

Broughton sea lice monitoring project: Ongoing since 2002, with Alexandra Morton of the Raincoast Research Society

May – June

Sonic environment: Jennifer Schine, SFU master's student, audio-records Billy Proctor's life history, studying how the sonic environment in this area has changed over time. (See photo on top right of Billy's hand-logger shack in construction.)



Welcome, summer visitors!

With the summer upon us, Salmon Coast Field Station Society (SCFSS) is excited to see old friends and looking forward to making new ones.

In case you are unfamiliar with us, SCFSS is a small, non-profit facility that provides affordable access to the Broughton area for research initiatives that are essential to understanding and restoring our coastal ecosystems and communities.

If you are interested in learning more, you can: a) **Look at our information binder**, at Pierre's store in Echo Bay, and keep your eyes out for upcoming presentations; b) **Contact us for a tour** of the station (info@salmoncoast.org, 1-250-974-7177, or hail us on the radio, "Salmon Coast," on Channel 16); or c) **Visit our new website**,

www.salmoncoast.org, and read a message from marine researcher Alexandra Morton, SCFSS's founder and director.



FUNDING NEEDED FOR BOAT MOTOR

The station is growing, and new research projects continue developing! We now realize we need a research vessel of our own. We have found a great deal on an 18-foot Lifetimer vessel (see above photo), but we need a reliable engine to keep it running. Contact the station for details if you are interested in helping us with this purchase. And make sure to check out our website for other items on our wishlist!



SUPPORT OUR WORK FOR WILD SALMON

Salmon Coast can't operate without your help. In order for us to make the Broughton accessible and affordable to graduate students and other researchers working on our beautiful coastal ecosystems, we subsidize the science that matters. Your contributions make the science possible.

There are many ways to donate; both in-kind contributions and monetary donations are appreciated! You can send us a cheque, donate on our website, drop off donations at the Echo Bay Marina, or stop by the station in person.

Special notice to our summer visitors: Drop by the store at Pierre's at Echo Bay Marina to participate in our salmon conservation fundraising campaign, **Pink Salmon on Parade**. Every donation, large or small, gets your name (or the name of your vessel), up on the wall on one of our "pink salmon." Let's fill the wall!

To our alumni and past participants: All it takes is a dollar! The more contributions from our alumni and past participants (however modest), the better our success rate will be for obtaining future grants and proposals to keep the station running. Our goal is to say that the station is so important to our alumni that 90% continue to support the station! So, we're asking you to please visit our website and, using our PayPal account, drop one or two dollars into our **Loonie Bin**. You can also pop a loonie in an envelope and mail it to us. Here's a chance to make a difference that even poor grad students can afford!

We're working for wild salmon;
We're working for you.

YOUR CONTRIBUTIONS MAKE IT WORK!

Hello & thank you from the new Station Coordinators

A note from **Zephyr Polk** and **Coady Webb** (and our three-year-old daughter, **Salix**), as we settle into our new home here at the station.

Dear Friends & Supporters,

The spring research season was in full swing when we arrived in early June to start learning the ropes from Scott, the long-time Station Coordinator. Coming from our quiet home on Read Island, it was hard not to feel a little overwhelmed, but we were surrounded by breathtaking natural beauty and wonderfully welcoming people, so we soon found ways to pitch in and help out. We are confident that we can learn the basics and hope to bring some new perspectives, ideas, and energy to the station. That said, we're very happy that Scott will be our close neighbour, so that we can continue to consult on sticky issues!

Our daughter **Salix** is thriving, delighting in the social energy of the young researchers, making friends in the larger community, fishing for shiners to feed the cat, playing with the friendly dogs, and generally enjoying herself. From the smiles that follow her, I suspect many of the station users are also enjoying having a little one around.

We are feeling increasingly comfortable in this community and look forward to settling in here to get down to work, and to meet

more of the fantastic people who seem to gravitate towards this station. Thank you to all of the station folks for your warm welcome!



The station is grateful to the many wonderful volunteers, visitors, friends, and neighbours who have come through the station this spring and who have helped in many ways, from donations of firewood, scientific references, GPS units, plants, and money, to cleaning, painting, hauling firewood, working on gardens, repairing and organizing station amenities, fixing motors, providing math-modeling mentorship and musical entertainment, babysitting our daughter, and helping in the kitchen! Also, thank you to Blackfish Lodge and Paddler's Inn for their continuing support and to Pierre's at Echo Bay Marina for hosting our "Pink Salmon on Parade" fundraising campaign this summer.

Sincerely,
Zephyr & Coady



MEGAN ADAMS FEATURED VOLUNTEER

Megan is currently working as a field biologist and intends to go to graduate school to research coastal fisheries issues. Here's a little note from Megan.

We have just passed the solstice, marking the beginning of summer. But to me, it signified the end of spring and the end of my 4th fabulous field season in the Broughton.

Salmon Coast was the springboard that launched me from an uninspired undergraduate into an enthusiastic young researcher. That first year when John Volpe and Alexandra Morton offered me a summer co-op position as a research assistant at a field station in the Broughton Archipelago, I had no idea what I was in for. I knew I wasn't supposed to eat farmed salmon but I didn't know why; I had no connection with the BC coast. My first summer was an incredible, eye-opening experience – one that led me to return here the following summer to do my undergraduate honours thesis and again last year to work as a research assistant to Alexandra. I returned again this spring to volunteer on a zooplankton and juvenile salmon dietary project. This spring, I also spent some lovely times in the gardens and with our neighbour Billy Proctor.

My time at Salmon Coast, and with Alex, has taught me to be passionate and to fight for the incredible coastal ecosystems and communities we have here in BC. I can't imagine a better place to get your feet wet as a student and to experience the true possibilities of meaningful research, sustainable living, and situated learning.

NEW PUBLICATIONS

Salmon Coast research hits the headlines

Salmon Coast is living proof that a high quality and quantity of research can be accomplished using modest facilities. During the 2010-2011 season, at least nine papers stemming from research completed at the station have been published, and more are currently in review, accepted, or in press in various peer-reviewed academic journals. For a complete list of our publications, please visit our website's "Research" page. Below is a sneak peek; a synopsis of two joint studies the station has recently supported.

Oh No Coho: Jumping Sea Lice!

What's known: Sea lice that build up in fish farms spread out to infest wild juvenile pink salmon. These infested salmon are more likely to be eaten by predatory juvenile coho salmon. However, the lice often jump to the coho before the pink is consumed.

What's not: How much do jumping lice affect coho infestation and population levels?

What's new: Juvenile coho salmon acquire 2-3 times as many lice from consuming infested pinks

as they do from simply passing an infested farm. Coho productivity is 7 times lower close to sea-lice infested farms. (Data found through a comparison of spawners per recruit in 53 populations on the central coast of BC, near to and far away from farms, between 1975 – 2007.)

What's next: With fewer and weaker coho, how is the rest of the ecosystem affected?

Related publications:

Connors B.M., Hargreaves B., Jones S.R.M., and L.M. Dill. 2010. *Predation intensifies parasite exposure in a salmonid food chain*. Journal of Applied Ecology. 47: 1365-1371.

Connors B.M., Krkosek M., Ford J., and L.M. Dill. 2010. *Coho salmon productivity in relation to salmon lice from infected prey and salmon farms*. Journal of Applied Ecology. 47: 1372-1377.



PINK & MINIHUMP MYSTERIES SOLVED

Last summer, SCFSS and MESSS collaborated to obtain genetic samples of thousands of pink salmon that, over the past two years, have been lingering in bays that traditionally did not contain salmon. The results are in, and we've identified the pinks as local to this region. It's still a mystery, though, as to why they gathered in those bays. If you're in the area, let us know if you spot them in Laura Bay.

After perplexing locals and biologists for years, the identity of the land-locked "Minihump" salmon from Gilford Island has finally been uncovered. MESSS's genetic samples obtained last fall reveal these fish as a rare strain of sockeye. We will continue to provide genetic samples to delve deeper into the origins of these unique fish.



Notes from the Field

Three researchers discuss why they keep coming back to Salmon Coast

"I like it here for the science – and what the research station does for people. A lot of volunteers, or those lucky enough to get a rare funded position, get involved in the research and the community here, and absorb a kind of passion.

Something about the combination of the science and the atmosphere here...you just see the light bulb go on at some point and they become inspired. And then you see that experience carry through in their lives. It is so rewarding to be a part of that."

Dr. Martin Krkosek (*above left*)
Lecturer in Zoology at New Zealand's University of Otago, and one of SCFSS's founders and directors.

"I came to the Broughton Archipelago to audio-record Billy Proctor's life history and his stories, and to understand how the sonic environment of this area has transformed.

Billy and I started to record his old hand-logging tools, fishing gear, and any other object in his museum that would make a sound. We then moved onto recording the sound of splitting cedar and Billy's cork boots on the dock. (To his chagrin, I asked Billy to walk up and down the dock over and over again, to get the perfect recording.)

The project quickly transformed from simply getting something to 'make a noise' to re-experiencing historical events; the re-enactment of sounds made the artifacts come alive. We decided that splitting cedar planks was

just the beginning – the real listening would begin if we re-built a logger's shack. And so, with the help of the lovely people at Salmon Coast, we did.

I feel so grateful for having had the opportunity to learn from Billy. He has taught me how to live in, belong to, and listen to this amazing place."

Jennifer Schine (*above right with Billy*)
MA candidate from SFU's School of Communication

CHECK OUT OUR NEW WEBSITE:
WWW.SALMONCOAST.ORG, LAUNCHED THIS JUNE!

"So many research institutions ask, 'How do we compete?' This one asks, 'How do we get the job done?' And if it takes our last dime, we're going to do it. That's really unusual and really special.

This station is guarding a precious national resource that is of inestimable value to all Canadians, even those who don't even know it exists.

It deserves to be maintained for future generations."

Dr. Neil Frazer
Professor at University of Hawaii at Manoa, author of "Boat Camping Haida Gwaii," coauthor of many Salmon Coast publications on sea lice, and member of the SCFSS advisory board.

