

# StreamTalk

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## Salmonids in the Classroom

### Ever wonder how it all began?

by Joanne Day

For 26 years, classroom aquariums have brought B.C. students and salmon together. Who came up with the idea?

Christopher Zimich had been teaching for just three years when in 1980 he encountered DFO community advisor Joe Kambeitz at a science teachers' conference. The event was called "Catalyst", and it stimulated a creative collaboration that continues to this day.

Joe's workshop was about getting schools involved with community projects. Chris felt that the kids in his inner city school did not have many opportunities to enjoy nature or to participate in social improvement, and here he saw a way for them to do both. When Joe visited Chris's classroom and saw his teaching menagerie of quails, an iguana, and gerbils, he thought, "Why not try to raise some eggs, and incorporate salmon into the life sciences program?"

The first tank was a tower design of plywood, fibreglass and glass. Chris cut out the pieces and students helped with assembly. Tap water percolated through a stack of heath trays and out through a drain. Joe trapped fish on a creek and took them directly to the school to extract and fertilize the eggs. But no salmon hatched that year.

Joe thought there might be a problem with chlorine. Samples were taken to a lab and it turned out there was copper in the water, probably from the pipes. It was also possible that the water was too warm for the proper development and hatching of the eggs.

Between the first and second year, Chris did research and presented Joe with some solutions. This time they used a bigger tank, and Chris collected three big tubs of water from the Serpentine River every morning. The water was chilled using coils of tubing through which cold tap water was run.

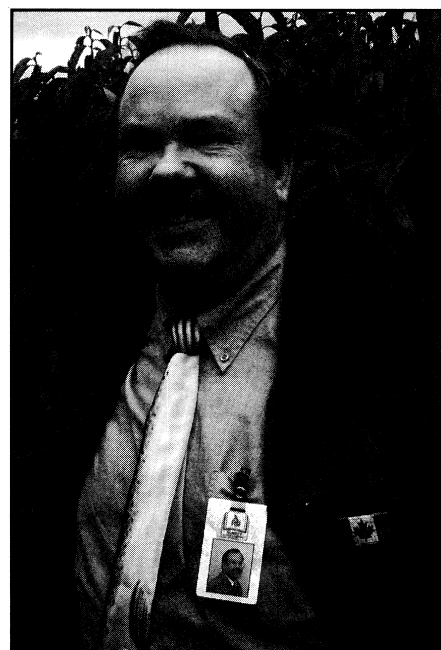
### Success at last

Serpentine River coho eggs taken in November 1981 hatched in February. The students put on a salmon-themed concert for their parents, and performed their own song, *Salmon Enchanted Evening*.

In the spring of 1982, Chris had 10 teachers at other schools participating in the program. During his summer holidays, he made tanks. There would be a quick phone call from Joe to say he was coming over NOW with fish to spawn. The teachers would scramble to meet him and take back a cup of eggs and a cup of milt.

All classes had a successful hatch that year. A memorable moment occurred when one Grade 2 class did their fish release at Little Campbell River and trout ate all the fry as the children released them. It was traumatic for the students, who had named each fish.

Chris got ready to present the *Salmonids in the Classroom* program to the Catalyst conference at UBC. He went with a minnow trap and a tank on the roof of his car, and buckets of water in the back. When he had to slow down for a light he ended up with 50 gallons of water flying over his shoulder. Undeterred, he went back



*SIC co-developer Chris Zimich, wearing a very handsome fishy tie.*

for more. While presenting at the conference, he also discovered that minnows can easily jump out of tanks.

More teachers and school districts became involved after seeing Chris at Catalyst. Programs began in the Sunshine Coast, Langley, Coquitlam and Vancouver, with Chris and Joe as mentors and advisors.

In the late 1980s, Chris went to work for the Ministry of Education as director of curriculum. He ensured that

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# Who is Big Eddy?

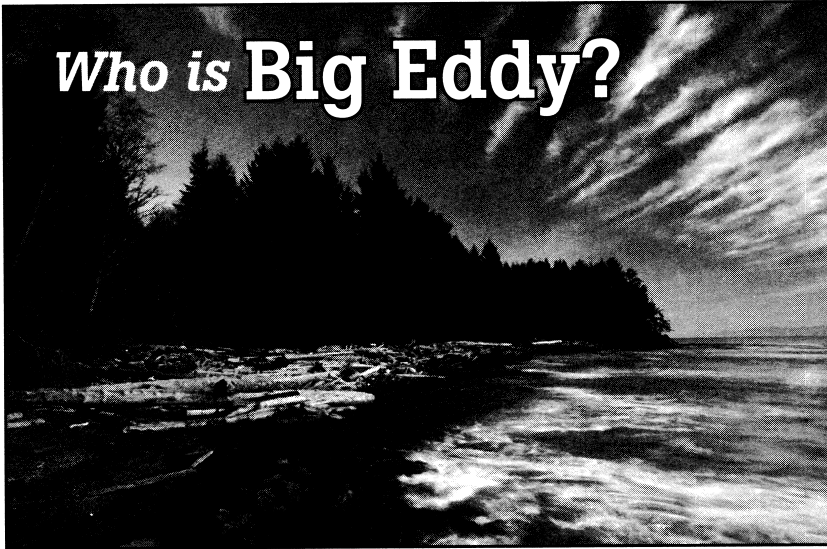


Photo: Peter Denting

by Karen M. Blinkhorn

Big Eddy is a new project gaining international attention as a potential model for cross-border stewardship of vital marine resources.

The Big Eddy region lies off the west coast of Vancouver Island and the northwest coast of the Olympic Peninsula. This marine ecosystem is fuelled by nutrients circulated in the Juan de Fuca Eddy. It supports large populations of fish, seabirds, marine mammals, and cold water corals.

"The Big Eddy provides an ideal opportunity for international cooperation and management in

one of North America's richest marine environments," says Sabine Jessen, conservation director of the B.C. chapter of the Canadian Parks and Wilderness Society (CPAWS).

At a meeting last year in Texas, leaders of Canada, the US and Mexico agreed that they would develop complementary strategies for oceans stewardship by emphasizing an ecosystem approach, coordinating and integrating existing marine managed areas, and improving fisheries management.

This fall in Tofino, a symposium will bring together managers,

stakeholders, and decision-makers from both sides of the border covering all marine uses and activities including fishing (recreational and commercial), shipping, recreation and tourism.

Big Eddy has sustained aboriginal cultures for thousands of years and is important to both Canada and the United States as a transportation corridor, fishing ground and tourism and recreation area.

"Water, species and impacts flow freely across the border," says Jessen. "For conservation purposes, it is important to consider marine ecosystems in their entirety, regardless of political boundaries."

Two years ago, CPAWS hosted a joint Canada/US symposium to facilitate the exchange of scientific and traditional knowledge of the Big Eddy region.

This time, regional management is the focus of the October 11-13 symposium. How can efforts be coordinated and conflicts resolved to preserve both the ecological and community values of the Big Eddy?

For more information on Big Eddy and the symposium see [www.bigeddy.net](http://www.bigeddy.net).

*"Salmonids," continued from page 1*

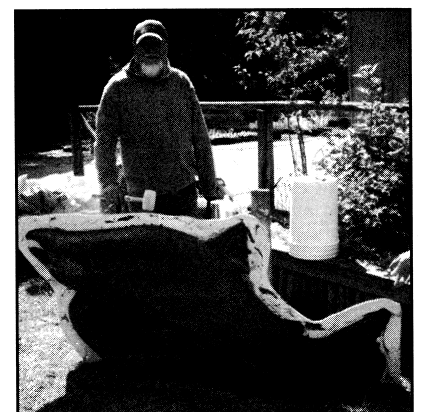
environmental issues were written into the curriculum for elementary and secondary levels, and promoted teaching about sustainable development.

"The DFO program gets kids to realize that they are part of the bigger community," says Chris. "The decisions we make today, we live with for generations; we need to make decisions that affect the longer term good." Salmon studies lend themselves to cross-curricular studies: art, drama, math, critical thinking, and global issues as well as science.

*Salmonids in the Classroom* now reaches students in over 50

school districts throughout B.C. and the Yukon. Many former students are still in touch with Chris, who is now principal of Kennedy Trail Elementary, and he feels that the DFO program has enriched the life lessons they learned. Students start a conversation with their families about the program and this leads to broader discussions about the health of our society and our world.

Fisheries and Oceans Canada would like to congratulate and thank Chris and Joe for all their years of dedication to the program. Creative collaborations like this will ensure the success of environmental education programs for years to come.



Joe Kambeitz, the other half of the team, with another creative project. With the help of youth volunteers, this mold is spawning cement sculptures for the Lower Mainland.

