Fish numbers are up

Restoration work making a difference

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Surveys conducted on the Seymour River suggest that habitat restoration projects undertaken on the North Shore waterway are positively impacting the numbers of fish found there.

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B.C. Conservation Foundation's Kenji Miyazaki stands on a boulder in the middle of the Seymour River as part of a B.C. coastal river fish habitat restoration effectiveness monitoring project. The initiative was recently undertaken by his organization as well as the B.C. Ministry of Environment.

Cory Hryhorczuk, fisheries technician, B.C. Conservation Foundation, says his organization and the B.C. Ministry of Environment recently conducted a number of night snorkel surveys on the Seymour and other rivers in the Lower Mainland and Vancouver Island to evaluate these efforts.

"The work that we do is primarily fish habitat restoration," he says. "The idea is to go into systems (that have) been impacted in the past and find out what the problems are, what's creating fish habitat impairments, and come up with recommendations on how to go about fixing it."

In many of the systems they cover, they've found there to be a lack of woody debris.

"A lot of the stream sites in the watersheds around here have been logged so there's no or very limited wood recruitment into the river systems," says Hryhorczuk.

This is problematic as wood is vital to rivers as it creates fish habitat in the form of pools, provides cover and gravel storage and ultimately shapes the river system. Without it, rivers become void with no habitat complexity or diversity.

"Fish populations will decline if the habitat is not available to them," says Hryhorczuk.

To counteract this problem, over the last nine years, the ministry and the foundation, along with other major partners, have been involved in many habitat restoration projects in streams on Vancouver Island and in the Lower Mainland.

To monitor whether the work has been effective, they go back to the areas and assess fish use there relative to control sites.

Their most recent monitoring project has seen snorkel surveys conducted on three Vancouver Island rivers and three in the Lower Mainland, including the Seymour River, which has had a number of habitat restoration projects undertaken on it over the years as a result of a decline in fish. Hryhorczuk credits this to a combination of industry and urbanization.

"The Seymour has been heavily impacted," he says. "It's got a dam which reduces the amount of water that's available to the fish and it also reduces the flow patterns."

Not only do fish below that have minimal flows, they also have a non-natural flow pattern. The dam also prevents gravel and woody debris from the upper watershed from making it down to the lower portion of the river. The river has also been impacted by residential and other industrial developments, says Hryhorczuk.

Restoration work on the river includes the addition of a number of woody debris habitat structures as well as large boulders. According to the recent snorkel surveys conducted (at night with a water temperature of 2.5 C as at this time of year fish hide in log jams during the day and tend to emerge at night to feed), the various initiatives have been effective.

In a control site they counted eight fish (a combination of coho and steelhead) per 100 square metres. In the restored sites they counted 52 fish per 100 square metres. This represents an approximately six-fold differential increase in the restored sites versus the control site.

"Larger numbers like this, obviously the fish are preferring that habitat, that's what the data is saying," says Hryhorczuk. "They're preferring much more the restored woody debris sites to a site that's void of wood. We believe over time it will improve the fish numbers -- the adult return numbers -- we just don't know how long it's going to take for that to occur."

By working to improve the fresh water conditions for fish they hope to make a difference in the oceans which are much more difficult to control.

"This is a way to enhance the juvenile numbers in the freshwater environment," he says. "The more fish we can produce in the freshwater environment, we're hoping that it will relate to greater numbers in the saltwater and then coming back."

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