# STEELHEAD SOCIETY OF B. C. ROUNDTABLE REPORT, MAY 2015

By Eric Carlisle

On December 7, 2014, an estimated 50,000 cubic metres of rock detached from the west wall of upper Seymour Canyon and slid into North Vancouver's Seymour River. One huge, house sized rock sits in the middle of the river and, at low flows, the water runs under this rock. Apparently, this slide blocks upstream passage by adult salmon and steelhead. This Seymour River (there are three in B.C.) is extremely rare; it is one of very few rivers on the coast with both summer and fall run coho salmon AND summer and winter steelhead runs. Spawning and rearing locations for all these fish are located upstream from the slide. However, there may be a small amount of spawning area in the canyon downstream from the slide and on the lower river normally used by a few winter steelhead.

Since SEHAB's January meeting, there have been two meetings of the Seymour Roundtable (on January 27 and on April 2). The Seymour Roundtable process was started about 10 years ago by CA Sandie Hollick-Kenyon. An extremely valuable process, Seymour Roundtable gets all the players in one room—DFO, Ministry of Forests, Lands and Natural Resource Operations, Seymour Salmonid Society, Metro Vancouver, and District of North Vancouver. Here, everyone can work out differences and develop action plans to help Seymour fish. Since the slide, First Nations—Squamish and Tseil Waututh—have become involved. The result has been a decision that in 2015, only monitoring will occur; there will be no remedial work done on the slide itself. DFO and MFLNRO must be able to prove conclusively that the slide blocks fish migration. Then, the two fish management agencies, with assistance provided by Metro Vancouver, can work on the slide. Since the slide was a natural event not influenced by human activities or errors, Metro Vancouver feels it should not be responsible for commencing any remedial work on the slide.

At the second Roundtable meeting, the group visited Seymour Hatchery and toured the Old Growth Trail. Here, they saw the river (summer steelhead and coho habitat) and tributaries (coho spawning habitat). The group also looked at locations on the lower river. The plan is to radio tag steelhead and coho on the lower river or in the lower canyon in order to see if the fish can migrate upstream past the slide. Wing nets will be used on the lower river to trap coho and steelhead for broodstock collection and for radio tagging. Seymour Hatchery staff will capture 300 pairs of coho (normally, they use about 60 pairs). Fry in excess of the hatchery's production target will be released into the river, creeks and habitat projects from Seymour Falls Dam downstream to the top of the canyon. The adult capture work will occur from July to December, water flows permitting.

On April 22, two of Seymour Hatchery's staff and the province's Kenji Miyazaki floated the river from the slide downstream to Pool 88, a distance of 1.3 kilometres. No steelhead were seen in the first spot above the first holding pool downstream from the

slide; this indicated that winter steelhead are unable to make the first of a series of leaps. 111 steelhead were counted; about 70% were wild and 30% were hatchery marked. Some of the observed steelhead were battered in appearance, no doubt from repeated failed attempts to leap upstream past the slide area. Also seen were two of the three winter steelhead which had been radio tagged; none of these three WSH has been detected upstream from the slide. Since the river had been low for several weeks, it was unlikely that summer steelhead kelts had been able to migrate downstream past the slide. Therefore, most if not all of the 111 steelhead counted (and there may have been more steelhead present) were winter steelhead. Most likely, these winter steelhead, unable to migrate upstream and reach their usual spawning areas, sought gravel areas of opportunity in the canyon and on the lower river. But, the result of this situation will be lower than normal survival.

Since the slide area is difficult if not impossible to access with heavy equipment, when work is done we would have to rely on floods to move the broken up rocks and create a series of steps which, hopefully, will be passable to adult salmon and steelhead. Issues influencing work on the slide include difficult access for equipment, material cannot be removed, and liability. Due to the danger of work on the slide resulting in flooding further downstream, much careful planning will be required and approval must be obtained from the District of North Vancouver.

Occasionally, a river angler finds a day on which the best bet is to put the rods aside and simply watch what is going on. I experienced such a day on the morning of Saturday, April 25, at Capilano River's Cable Pool. Mind you, fishing would have been difficult anyway; fairly low flow and, when I arrived, I found 400,000 or 500,000 greedy little mouths were present (due to a recent release of Chinook smolts). Standing on the cliff top about 30 feet above the water, I could see the "black clouds" of Chinook smolts moving around in the pool, smolts jumping, and, from time to time, groups of smolts detaching themselves from the main school of smolts and proceeding into the tailout and then out of the pool. But other fish were present; a pair of winter steelhead was participating in spawning activity on a patch of gravel in the pool's tail end. The usual behaviours were easily seen—female digging, male holding beside her, male vibrating and male "crossing over". Then the pair held side by side with their mouths open for several seconds. Of course, we all know what that means—egg deposition. But as soon as the two fish separated it became totally fascinating, for the orange eggs deposited in the egg pocket dug by the female steelhead were plainly visible. For a minute or so I could see the eggs, then the female steelhead's further digging activities covered the eggs with gravel. I could even see the gravel flying through the water as the female steelhead covered her eggs.

Will these eggs survive? There is no way to know for certain, for Cable Pool's tailout has only thin patches of gravel. This spawning occurred when the Capilano was fairly low, so, hopefully, the eggs should still be covered once the river drops to summer minimum flow (which, due to the light snowpack, has almost occurred already). But as

long as a very heavy rain does not happen, resulting in severe flooding and scouring of the gravel at this location, in the first half of July steelhead fry should emerge from this redd site.