

Wild Fins: Salmon and Trout in the Somenos Basin

By Dr. Dave Preikshot (all illustrations courtesy of Fisheries and Oceans Canada)



Kw'a'luhw, Chum Salmon

The Somenos Watershed is home to five species of Pacific Salmon: Chum, Coho and Chinook Salmon, Cutthroat Trout and Rainbow Trout. Yes, you read that correct: Our two favourite resident trout are, in fact, salmon. This fact has been the source of continual smugness for many 'know it all' fish scientists. Even the slightest cue can send me into a stream of consciousness fever dream in which the better part of an hour could be lost to a discourse on the true nature of the classification of salmon, trout, and charrs. Thankfully, dear reader we shall confine ourselves to a description of the general biology of salmon and trout found in in our shared watershed.

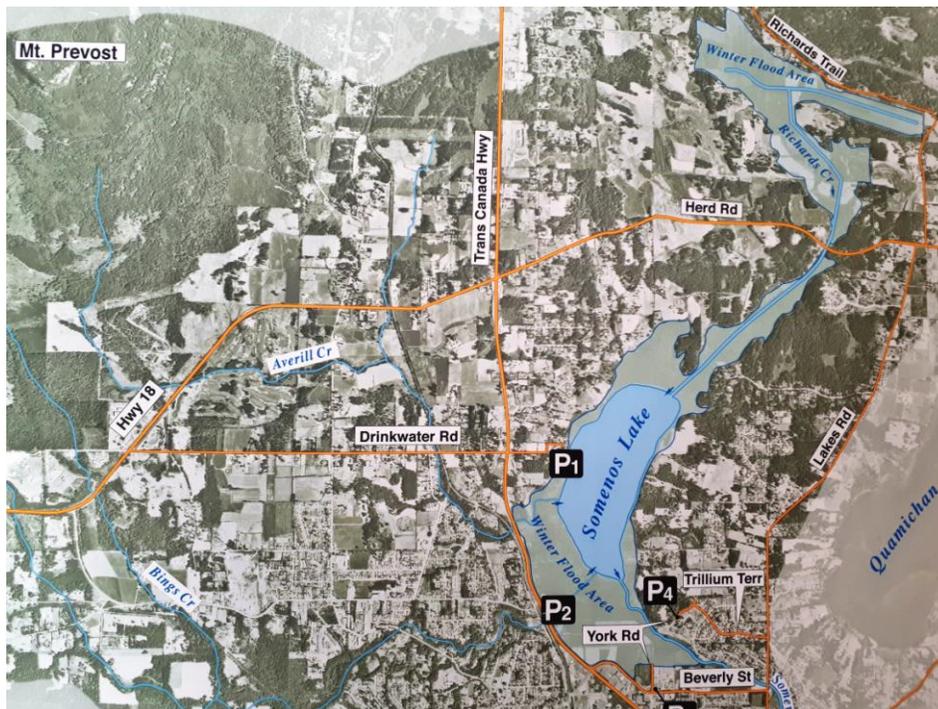


Figure 1: General geographic features of the Somenos Basin.

Somenos Lake has three main tributary streams; Averill Creek, Richards Creek and Bings Creek and one outlet stream, Somenos Creek, which empties to the Cowichan River. Somenos Lake is also surrounded by seasonally flooded wetlands with numerous side channels. This complex of aquatic habitats has long been recognised as spawning and rearing habitat for Pacific Salmon.

Unfortunately, as many of you will be aware, Somenos Lake has been subjected to increasingly powerful blooms of blue-green algae during the summer. These blooms are caused by the accumulation of phosphate in the lake. This phosphate has built up over the last 150 years and can be traced back to additions from deforestation, domestic waste water, runoff from urban businesses and the extensive use of fertilisers by homeowners and farmers. The blue green algae blooms generate anoxia (absence of oxygen) in deeper waters of Somenos Lake, which used to be a summer refuge for many salmon and trout. Therefore during the summer all salmon and trout must exit Somenos Lake to find refuge in the surrounding streams and wetland channels.



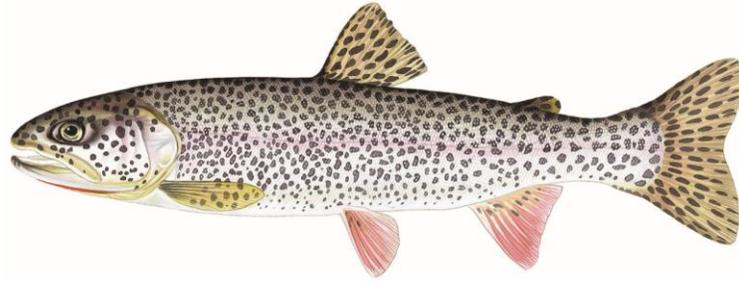
The'wun, Coho Salmon

These refuge waters remain cool throughout the summer thanks to shading from trees and being fed by springs. These habitats provide cover from predators and a place for feeding, in the form of insects falling from the surrounding trees.

Adult Coho Salmon ascend the tributaries in relatively large numbers to spawn in the late fall and early winter. As many as 150 spawning adults have been observed in Bings Creek and in a good year more than 1000 spawn in Richards Creek. Chum Salmon are also known to spawn in the streams and side channels of the wetland. I have even observed an enterprising pair of Chum Salmon spawning in the ditch that running along Canada Avenue.

Cutthroat and Rainbow Trout live their entire lives within the Lake and its surrounding streams. Because they remain in fresh water the adult Cutthroat and Rainbow Trout are quite small ~ 6 inches when they spawn. It is likely that each creek around Somenos Lake supports many hundreds of these trout.

Coho Salmon spent the first year of their lives in fresh water. In the summer you can see them mixed in with groups of Cutthroat and Rainbow Trout. A great place to see such aggregations is the pools on either side of the culvert where Bings Creek crosses the intersection of Phillip and Mary Street. Another accessible place to observe salmon and trout is the pond located in the wooded area of the Rotary Nature Walk at the Cowichan Sportsplex. You can entice salmon and trout to come to the surface by tossing in tiny bits of grass stems or other plant material. The fish will investigate whether these bits are insects (a favoured food item) that have fallen in the water. In the summer you will likely observe two sizes of salmon and trout: those about two or three inches long and larger ones up to six or seven inches. The smaller ones are the newly hatched fish whereas the larger ones are one year old Coho Salmon and maturing Cutthroat and Rainbow trout.



Kw'suts, *Cutthroat Trout*

After emerging from their eggs in the spring, Chum Salmon fry move downstream to Somenos Lake and Creek where they linger for a few weeks before heading out to the ocean in late spring. At the same time large numbers of Chinook and Coho Salmon smolts from populations in the upper Cowichan use the Somenos basin as a staging area before their own journey to the ocean. While in the Somenos area these juvenile salmon feed and grow in preparation for their time in the ocean. The Somenos basin also provides lots of refuge areas for these juvenile salmon and trout. The main stem of the Cowichan River is a great hunting arena for Great Blue Herons, Mergansers, River Otters, and Raccoons all of which are on the lookout for young salmon. Finding juvenile salmon is a lot harder for these predators in the shaded tree canopied channels of Somenos Creek or in the relative expanse and depth of Somenos Lake.

Like other sub-basins of the Cowichan Valley, the Somenos area has been experiencing decreased surface water flow in the recent past. During the last decade Bings Creek flow August and September is one third to one half of its range between the 1960s and 1990s. This trend is problematic for salmonids seeking their Somenos summer refuge habitats. Therefore, an important goal of the Somenos Marsh Wildlife Society is to foster salmon and trout in the Somenos Watershed by protecting and restoring habitat in the lake, streams and wetlands.



Kw'suts, *Rainbow Trout*

Our work thus involves extensive research and monitoring of the aquatic areas in the watershed to foster management actions that will protect salmon and trout populations and restore their numbers to historic levels. Key aspects of this will be solving the problem of blue-green algae blooms in Somenos Lake, controlling Parrots Feather in Somenos Creek and restoring creek and wetland habitats surrounding Somenos Lake. Thanks to collaborations with Cowichan Tribes, local government, provincial and federal agencies and other environmental stewardship groups, we are well along the path of making sure that salmon and trout are part of the Somenos Watershed for now and the future.

In future articles I'll talk about other fish species, like Three Spined Stickleback and Peamouth Chub also found in the Somenos Basin and some of the fascinating stories that surround their biology. I will also go into greater depth (ha!) on individual salmon species and describe the scourge of invasive fish species in Somenos Lake. For those of you with a sense of the absurd: I may even describe the whacky history of classifying salmon and trout.