



Spring Newsletter - June 2023

Thank you to our members and donors who continue to support Outreach and Education programs and Restoration projects.

Another dry, hot summer is in store for the Tsolum River and its tributaries.....we are very concerned about the recent climate trends and the impact on the watershed.



Finn and Gord rescuing fry from an isolated pond on the Tsolum



Keep your **Eyes on the River**

Eyes on the River is a group of individuals and families that regularly walk the Tsolum River and report their observations to Allan Chamberlain, a Tsolum River Restoration Society (TRRS) outreach volunteer and retired Fish and Wildlife Professor. The information gathered includes fish and other wildlife sightings, water quality data, and general observations about the status of the river and watershed. The findings are summarized periodically and circulated to all of the observers. Sharing information creates a better understanding of the Tsolum watershed and the status of its native fish. Using this information, we can identify focus areas for restoration and advocate for best practices for fisheries management, with the goal of improving the well-being of the native fish.

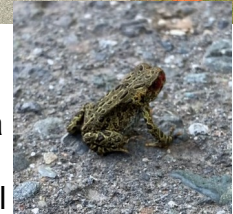
This spring, with no rain and the very low flows, water temperatures in the Lower Tsolum have risen to 23C. This is only 3C less than lethal incipient level for salmon fry. If the heat and dryness continue, we shall begin to see salmon fry dying of heat stress in the lower Tsolum, especially sections where there is no riparian cover where water heats up first. If you wish to add your eyes to observing the Tsolum River, contact us at tsolumriver@shaw.ca.

Tsolum Wetland Interest Group (TWIG)

This 2nd year of drought conditions is likely a cause of the low water in our wetlands along the upper area of the Tsolum Watershed. We are noticing changes in our various wetlands that parallel the Tsolum River: thick aquatic vegetation, shallow areas, floating mud islands, and less aquatic bird action. Beavers used to be plentiful in this area (we had 9 at one time); this year there have been only 1 or 2 sightings.

iNaturalist Training - the local TWIG/TRRS people hope to adopt the use of iNat to monitor this season's Western Toad-let migration (thanks to Cain Tipton for training).

CVRD Wetland Purchase - this property on Spike Road lies beside a magnificent wetland within the Tsolum watershed. It is also the One-Spot Trail extension that will link the Headquarters One-Spot to Endall Road. TWIG hopes to be involved in the planning process of cleaning up and assessing this large property. There will be a public showing of the property on Aug 19 and it would be good to have TRRS presence since this wetland connects to the Tsolum River during high water. If you wish to be involved with TWIG, contact us at tsolumriver@shaw.ca.



Caroline Heim, Project and Outreach Coordinator, “retired” in May. Caroline was with TRRS for 7 years. She will be greatly missed.



Thank you Caroline for all your hard work and dedication....good luck in your next adventure



Introducing our new staff.....



Katie Gair **Project Coordinator**

Katie started with TRRS in February as the new Project Coordinator. She is excited to make an impact and new connections in the Tsolum watershed through restoration, monitoring and helping with outreach. Katie's background is fisheries biology, (private and government sectors). Katie graduated from UVic with a B.Sc. in Marine Biology,

Mary Maclean **Outreach and Education Coordinator**

Mary joined TRRS in March to work in outreach, education and administration. Her background includes a BSc in Marine Geology and Oceanography and a BEd, (both UBC). She hopes to promote preservation of the Tsolum River watershed and wetlands for all living species. She enjoys walking the Tsolum daily with her dog.



Cain Tipton **Summer Student**

We'd like to welcome Cain Tipton as our Summer Student. He will be entering his second year at UBC Okanagan, studying Earth & Environmental Science. Cain was born and raised in the Comox Valley and has been volunteering with various restoration groups ever since he started high school. Cain will be involved with many projects during his summer term with TRRS.

Project Reports

Fish Outmigration Spring 2023

We have completed our annual monitoring of fish out-migration, using the floating trap with a rotating drum (RST) that passively traps fish as they swim down river.



The fish are held temporarily in tanks so that volunteers can count and identify the fish before releasing them. **Overall, catch was lower than previous years.** This is likely partially due to high waters forcing TRRS to temporarily decommission the trap. Lack of rainfall and low flows last fall inhibited fish migration in the lower Tsolum, and compounding factors such as rearing and ocean habitat degradation (warming waters, poor abundance of forage fish, zooplankton and riverine aquatic invertebrates, river-bank erosion and high-sediment loads, drying channels, poor riparian health, eutrophication, etc.) have had negative effects on survivorship of all stages of the salmonid life cycle. We continue to believe the monitoring of this situation is important and thank our volunteers for their dedication and passion, as we could not do this monitoring without them. Thanks also to the landowners along the lower river who gave us permission to access the trap by crossing their land.

Bullfrog Eradication Project

Work continues to try and control this highly successful invader. Green frogs (smaller than bullfrogs, also invasive) have also been found in the watershed. This year the team has removed about 8000 adults and tadpoles, mostly from Sunnydale and Mulligans golf courses and ponds near Sandwick and Country Market. Since bullfrogs spend up to 4 years at the tadpole stage, it has been important to keep up the consistent effort. Hopefully next year we will see significantly reduced numbers of adults. TRRS will be holding a second hamper trap building workshop in the near future. Anyone wishing to take part, please contact us via email



Pumpkinseed Fish Project



Pumpkinseed fish found in the lower Tsolum River

Pumpkinseed fish have a life span of 8-10 years. They can grow to up to 5cm in their first year, and reach sexual maturity in 3 years. Pumpkinseed fish are native to Eastern Canada and USA and prefer to live in slow moving streams or small lakes and ponds. In 2022, pumpkinseed fish were found in the Dove Creek area, by a TRRS volunteer/landowner near Wildwood Marsh. This alarming discovery prompted TRRS to try and prevent pumpkinseed fish from spreading further afield. The diet of these fish (mainly invertebrates) competes directly with our native species, posing a serious threat to our ecosystem. In early May TRRS received funding to address the problem, and a fish fence and trap box was installed on



Smit Creek; a tributary of the Tsolum River that connects to Wildwood Marsh. The trap captured 3590 Pumpkinseed fish between May and early June. The majority of the fish caught were yearlings, but unfortunately older fish have already been found downstream in the lower Tsolum River. Further steps will have to be taken in order to properly address this issue. TRRS has teamed up with the CVRD to work on a solution. We appreciate the diligence and cooperation of landowners in this endeavour.

Outreach and Education Update

This spring we visited Puntledge, Brooklyn and Courtenay Elementary schools, engaging hundreds of students with our watershed model. As the weather improved and the river came to life, we held Aquatic Insect workshops for the Indigenous Education class, Huband school, Royston El. and Queneesh El. We also participated in Isfeld's Ecofair in April. In May we took part in the annual "River Never Sleeps" event at the Rosewall Creek Hatchery. Our first appearance at the Farmer's Market was in mid June where we entertained many (especially kids) with our live display of invasive bullfrog tadpoles and pumpkinseed fish. We will be back for an encore on August 19th, followed by CVEX Fall fair and the Black Creek Fall Fair in September. These events are a great opportunity for people to meet some of our very active directors, staff and volunteers. And of course we have a booth at Music Fest (July 14-15), including an Aquatic Insect event for families, on-site at the riverside.



Anyone wishing to help at outreach events, please contact us:

<https://www.tsolumriver.org>
tsolumriver@shaw.ca

To report physical damage to fish habitat, death of fish, and deposits of sediment in fish habitat call:

DFO's Observe Record Report (ORR) is a 24/7 toll free tip line or Toll free 1-800-465-4336 or by EMAIL: DFO.ORR-ONS.MPO@dfo-mpo.gc.ca

To report oily water, discharge of chemicals or sewage, or spills, that requires an immediate response, please call:

Environment and Climate Change Canada (ECCC) at 1-800-663-3456.



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