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North Island

WEEKENDER

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Serving the Comox Valley, Campbell River & The North Island

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Clear, cool water drips from the palm of Father Charles Brandt. Despite its refreshing look, the Tsolum River, located in the Comox Valley, is in trouble and fish stocks have been decimated over the past 40 years. However, local residents are working to help save this precious resource.

PRESERVATION

Saving the Tsolum

By Father Charles A.E. Brandt

There is a ground-swell occurring: a renewed interest in the Tsolum River watershed.

It is coming not so much from politicians, or from organized environmental groups, but from the people themselves who live and work in the watershed. And this is how it should be. For unless a movement springs from a grassroots level, it can very easily get bogged down in bureaucratic wrangling.

In the 1950s, the Tsolum boasted great runs of salmonids: pink salmon in excess of 150,000; coho runs in the thirty thousands; chums and cutthroat in the lower regions of the river; and steelhead trout in the 17-23 pound range.

The river was rich in small invertebrate life, mostly free from silt,

and ran through a splendid forest of fir, hemlock and cedar.

The decline of this fabulous river — as with many of our Island rivers — began in the mid-fifties with the clearcut logging that occurred along almost its entire length and breadth. The logging eventually brought flooding to the river, movement of gravel, silting, and smothering of eggs and invertebrate life, and finally with extremely low flows in the late summer months the consequent depletion of oxygen and increased temperatures.

Coupled with the disaster of

Clearcut logging, mine runoff and irrigation have all led to the decline of the Tsolum River

clearcut logging, was the lowering of the water levels due to extraction by irrigation and household use. As well, toxic farm fertilizers have left their impact on the river.

When the airbase was constructed at Comox, vast quantities of spawning gravel were removed directly from the streambed to construct the concrete runways. The river fast became a resource for every purpose other than that which nature originally intended.

And then to cap it all, Mt. Washington Copper moved into the upper watershed, just to the east of

Mt. Washington Ski area and along side of McKay Lake, and in 1964 commenced its open pit mining of copper and precious metals.

Exceedingly short-lived, the company went into receivership in 1966, leaving in its trail the unreclaimed pits where pyrite ores lay exposed to water and oxygen.

This ore, with a high content of sulphur, quickly formed sulphuric acid by coming in contact with the oxygen and water. The acid released the copper (with the assistance of certain bacteria which thrive on this acid habitat). From the exposed ore (overburden) copper leachate formed and moved into the watershed via Pyrrhotite Creek, McKay and Murex Creeks until finally it reached the Tsolum River, and eventually the Puntledge

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River needs to be a priority

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where together they form the Courtenay River, and so on into the great Courtenay Estuary.

Copper is the dreaded enemy of young salmonids (coho fry and smolts, along with pink and chum, steelhead and cutthroat fry), and it is a scientific fact that the amount of copper that finds its way yearly into the Tsolum watershed kills young salmon and deters adult salmon escaping back to the river to spawn.

For 10 years the government(s) have attempted a cure of this acid mine drainage (AMD), costing the taxpayers of the province \$1.5 million to date.

The cure has been illusive. Today, there is as much copper in the river as there was 10 years ago.

When the government began its remedial action in 1988, it followed the number one option recommended by SRK (Steffen Robertson & Kirsten, a Vancouver firm) and gathered all of the overburden into one great pile (referred to as the east part of the north dump), mixed it with lime and then covered it with one metre of till (a glacial deposit consisting of gravel and clay).

It was a beautiful piece of work

and formed a giant raincoat over the ore pile. And although the experiment has attracted worldwide attention, it has not worked.

Overlooked at the time was the effect ground water had in producing leachate as it moves through the fractured pit floor. The hope was that the acid mine drainage could be cured at its source.

SRK had several other options, which were not looked at seriously at the time. One of these options was "treatment." That is how most mine operations deal with their leachate. For example, at Westmin Mine they simply treat the leachate with lime which precipitates the copper. They deposit the sludge formed from this operation down an abandoned mineshaft. So there is no problem.

But the remoteness of Mt. Washington and the winter conditions make the construction and maintenance of a treatment plant impractical and extremely expensive. And besides, there are no vacant mineshafts.

But it appears now that a treatment plant will be the ultimate solution to the Mt. Washington problem. Engineers talk of locating the treatment plant lower down the mountain, say in the vicinity of the

dryland sort near the Duncan Main, not far from Wolfe Lake.

The leachate would have to be piped down the mountain to this site. We are looking at a cost of approximately \$6 million. That may seem like a lot, but SRK estimated that at present the community is losing approximately \$2 million a year from the Tsolum River resource (fish, jobs, and recreational value).

So far, \$60 million has gone down the drain.

To prepare for the final solution, to this great river, much work needs to be done during the interim. And there are many members of the community who are willing to make the preparation and study that is needed, and indeed are already doing so.

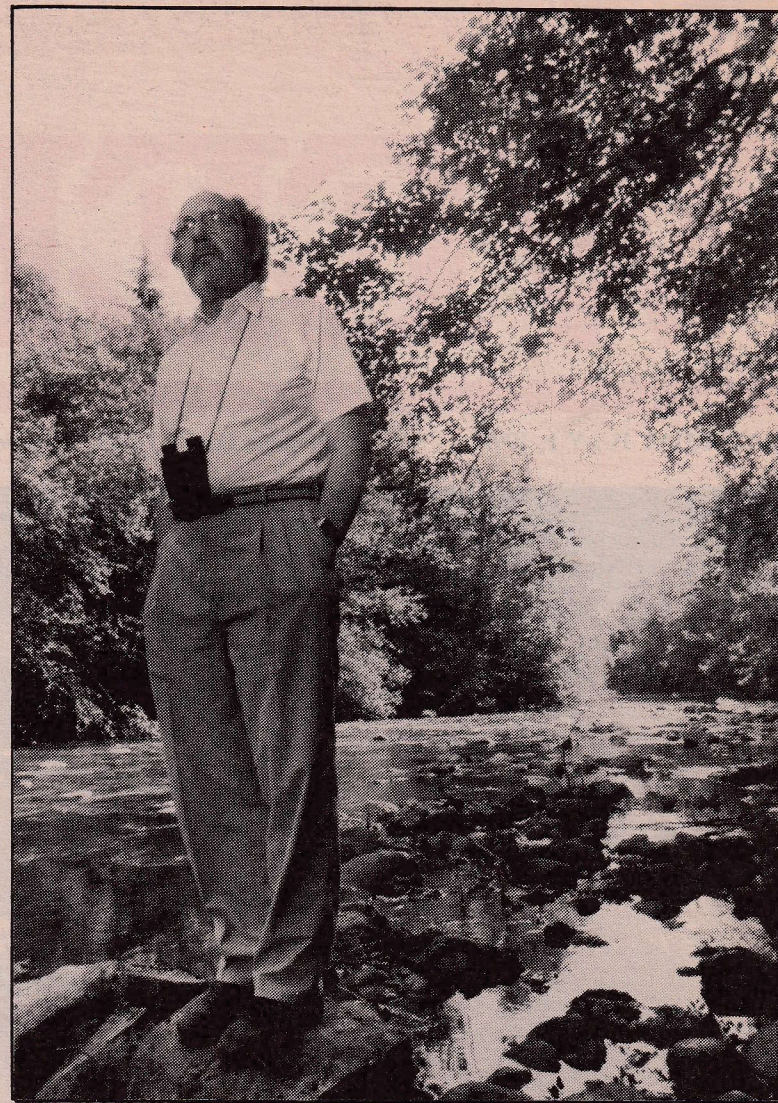
Although by far the greatest quantity of copper enters the Tsolum via Pyrrhotite Creek flowing directly from the old mine site. There is indication that some copper enters the system via McKay and Murex Creeks.

These streams have to be carefully monitored so that there will be no mistake as to where all of the copper is coming from.

In addition, the Tsolum itself must be carefully studied: continued copper monitoring is necessary; the monitoring of stream flow, water depth, temperature and dissolved oxygen during the critical low flow period from May to October must be intensified; the comparison of actual water extraction with water licences must be studied; siltation monitoring, salmon enumeration, etc. must be continued.

The Tsolum Ecology Centre, leased from the DFO, can be used as a base for this ongoing monitoring and preparation for the mine reclamation. Project Watershed is already contributing greatly towards a solution to the Mt. Washington problem with their accent on Watershed Stewardship.

As well, the Comox Valley Chapter of the Steelhead Society through its Tsolum River Enhancement Committee, The Tsolum River Wa-



Father Charles Brandt stands tall for the environment as he heads up the Tsolum River Enhancement Society. This photograph was taken on the Tsolum near his once-favorite fishing hole that used to teem with steelhead trout.

tershed Protection Society and the Black Creek Ratepayers Association all are making contributions and have a deep concern for this river.

Finally, a new Watershed Coordinating Assembly has been established. It has been handed the task of bringing about a solution to the degeneration of local watersheds.

It seems to me that the Tsolum watershed should be high on their list of priorities. The assembly is not a new authority, but rather it calls for the cooperation of all parties whose goals are interdependent. By working together to solve a problem each party will gain more than it could by traditional bargaining techniques where

a gain for one party is seen as a loss for the other.

The river will never again be what it was intended to be, but with our new insights, and by working together as a community, we can allow the river to once again flow clean and sweet to the estuary and become the rightful home to those creatures whose home it rightfully is.

Father Charles A.E. Brandt is the chair of the Tsolum River Enhancement Committee and the Comox Valley Chapter of the B.C. Steelhead Society.

College appoints

HONDA COUNTRY'S USED CAR CORNER



Trucks, Trucks...

'87 FORD F150 S/CAB 4X4

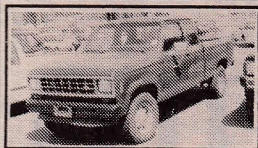


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