

"Trout love any type of submerged woody debris, such as this dead willow along the stream bank. The sunken willow provides over head cover and a sense of security for resident trout, which relate to this kind of debris in the stream channel."



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### Bow Valley Riparian Recovery and Enhancement Program for 2017

#### Program Partners



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Articles by: Grey Woods and Contributors

### Small Stream Trout - Bighill Creek Fishery



**Above:** This chunky Bighill Creek brook trout was tempted by a trout fly that the publisher tied during the winter months. Over the years more trout like this are being caught in the creek.

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### Large Trout Lurk in the Water's of the Lower Bow River



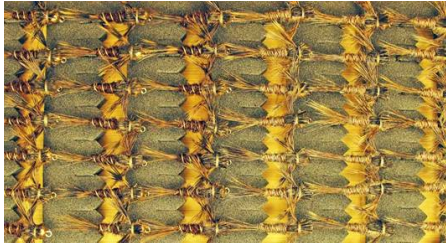
**Left Photo:** Fly Fisher Sebastian Stewart holds up a large brown trout that he hooked on the Bow River in Calgary. Trout like this are plentiful in the lower Bow, if you present the right fly pattern in the right manner. Sebastian has been guiding on the Bow River for many years, but when time permits, he is casting his own fly patterns on the river and other well known trout streams. This photo was taken by one of his fly fishing buddies, George Beasley, or Jordi as he is referred to by his friends.

Photo by: George Beasley

### Winter Tying

Winter is the best time to tie trout flies. The publisher enjoys this past time and it is a great time to stock up on some favourite fly patterns.

A few local fly tiers have written articles on their favourite patterns which can be viewed on Pages 3 and 5. Also included in this issue are a few submissions by the publisher. This fly tying feature should help motivate fellow fly tiers to sit down at the tying table.



# Stream Tender Magazine



March Issue — 2017

Magazine Mission Statement

Publisher/Editor Information

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### New Generation of Trout Hatch on Millennium Creek



This young brook trout hatched in January on Millennium Creek — This year's hatch will be a good one with plenty of new trout in the creek.

[Read More](#)

### New Trail Closures Will Help Protect Native Cutthroat Trout



**Above:** Off road enthusiasts compete for camping space on the Weiporson Creek recreation area on long weekends. Their trail riding activity has put pressure on the survival of native cutthroat trout. New trail closures, put in place in 2016, will help protect the native trout from ATV traffic.

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### Burnt Timber Cutthroat trout are now protected under new angling regulations.



### Native Willows and Trees are Growing Fast



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**Above:** This willow plants still shows the top of the cutting that it was grown from. The remnant stub will decay over the next few years and only the live branches and trunk will be left on the new native plant.

### "West Nose Creek Brown Trout Recovery"



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**Above:** This brown trout was caught on West Nose Creek in the summer of 2016. The future trout fishery on West Nose Creek holds promise for the future, with evidence from recent developments proving the trout's recovery.

### Bighill Creek Stream Bank Stabilization Projects



**Above:** This is one of 58 stream bank stabilization sites on the Bighill Creek, which is part of the "Bow Valley Riparian Recovery and Enhancement Program". It has taken a few years to get this far, but the results are now evident for future success. The native willow plants stand out in the winter snow covered ice of the Bighill Creek. (See Page 4)

### The 2017 Riparian Planting Program - In the Works

It is March and another 2017 riparian planting program is already underway. So far Bow Valley Habitat Development and its partners have committed to planting over 7,000 native willow and tree plants, which is a great start for the season. By April, I am confident that that number will increase, but by how much is yet to be determined. Bottom line, we are in for another great program this year. This is all part of the Bow Valley Riparian Recovery and Enhancement Program.



### Fish Habitat - The Natural Approach

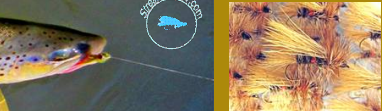
When designing a fish habitat enhancement project, such as pool habitats or other in channel structures, it is very important to keep them natural in appearance. This is the objective behind a successful enhancement program. This can be achieved by using natural materials and leaving no sign of exposed anchors, or other man-made materials. After all, the goal is to leave the stream looking like mother nature intended it to look like. The log V-weir and pool below was constructed by Bow Valley Habitat Development, with funding provided by ATCO Pipelines. This is what the pool looked like after three years of naturalization. The steep stream banks on both sides of the stream channel made this habitat a challenge to complete successfully.

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"Stream Tender Magazine has changed the content of this publication to also include more articles and fisheries related news to cater to the sport angler crowd. As stakeholders in the resource, sport anglers have a vested interest in the health and well-being of their local trout waters. In future issues of the magazine, there will also be more writing directed at the interest of fly tiers as well. The primary focus will still be on local fish and riparian habitat enhancement projects, by Bow Valley Habitat Development and other national and local NGO's."





## Ghost Lake Whitefish on a Fly

## Invertebrate Habitat—Suspended Substrate

In order to have a productive trout fishery in a stream, there needs to be an abundance of food. A healthy invertebrate population is key in sustaining good numbers of trout. Aquatic invertebrates are no different than trout when it comes to a dependency on good available habitat.

Stream bottom substrate, such as gravel, cobble and boulders are the most common type of habitat for most aquatic invertebrates, but when this type of habitat is limited, there is the suspended substrate that provides the insects with a suitable habitat to thrive in.

Suspended substrate habitat is made available by willow and tree limbs and trunks, shoreline grasses and aquatic plants. All of this habitat is available to invertebrates above a silt covered streambed, so it is a more reliable type of habitat year round.

On a few local streams, such as Bigbill Creek and West Nose Creek, this type of invertebrate habitat is of major importance for sustaining a fish population in the creeks. With heavy annual silt loading and constant streambed movement of this silt, the availability of gravel, cobble and boulders for the invertebrate habitat is limited.

The conditions on West Nose Creek are especially poor for invertebrate populations. An ongoing riparian recovery program that is now underway, will provide much better suspended substrate invertebrate habitat in the future. Once willows and trees have been established along the water's edge on the creek.

Presently, West Nose Creek has shoreline grasses and sedge that provide good habitat for a number of different types of invertebrates. Enough to sustain the creek's fish population.

Most stream invertebrates require a good supply of well oxygenated water; free from silt. By inhabiting areas of suspended substrate habitat, their needs are fulfilled. A good supply of organic plant life provides nutrient for those invertebrates that are classified as grazers. These grazers are the base of the invertebrate food chain.

The dead leaves, grasses, roots and twigs that sink to the streambed, create an environment rich in detritus and invertebrate populations. This detritus collects in still water lateral margin habitats where invertebrates thrive. The caddis fly larva, gammarus shrimp, mayfly nymphs and many other invertebrates can be found in this deposited organic material.

Riparian recovery plantings will improve invertebrate habitat over time. This will be evident when the stream's trout population increases.



**Above:** Tiny midge larva cling to a submerged willow twig. They are attached to the woody debris by their tails, using a silk like material.



**Below:** A gammarus shrimp makes its home in a pile of dead leaves, roots, twigs and other organic material. It feeds on microbial life that thrives in the detritus.



### Left Photo:

This canary grass that is drooped over the water's edge along the stream bank, provides important suspended substrate habitat for aquatic invertebrates in the creek. The tall grass is well anchored to the stream bank and areas below the canopy collect dead plant material, which also provides habitat for life below the surface of the stream.

Canary grass and Western Water Sedge are the most common shoreline grasses on many of our area streams. During the fall and winter months the tall grasses relax over the water, sometimes a heavy snow will force much of the grass down over the flowing water. This covering of dead and dying grass can also provide good overhead cover for resident trout in the stream.

Once submerged, the dead grass enters a state of preservation, in the cold water of the creek and it will stay like that for a few years. Willows growing along the water's edge will also be forced down over and in the water by heavy snow and ice rain.



**Left Photo:** For riparian planting along area streams, cuttings from native willows and trees are grown until there is both root and top development, before they are planted along the water's edge.

This method of re-establishing native riparian willows and trees along area streams is a very cost effective method of planting. Over time, these new plants will also provide good suspended substrate habitat for both trout and other aquatic life in the stream channel.

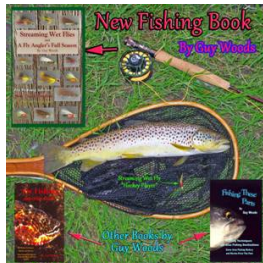
## The 2017 Bow Valley Riparian Recovery and Enhancement Program Update

In a few months, the 2017 Bow Valley Riparian Recovery and Enhancement Program will get underway. Bow Valley Habitat Development and its partners have budgeted for a substantial riparian planting program this year.

Over the past few years, a total of just over 41,000 native willows and tree plants have been planted on over 20 kilometres of stream bank. This year's program will bring the total over 50,000.

I look forward to keeping you posted on this year's program and how plants from the previous three years are growing. The next issue of this magazine is due for release on June 1st of this year, so please check it out.

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Available in 2 sizes  
1, 2 & 3 weight  
and  
4 & 5 weight

## Fly Reels

## HOME

In the 1970's, when I was doing a lot of shoreline fishing on the Ghost Lake Reservoir, on some mornings the surface of the upper area of the lake would be active with rising fish. At that time, I didn't realize that the fish that were surfacing were Lake Whitefish, but I did know that they were very large in size.

Later on, in 1989, Roger Packham, of Alberta Fish & Wildlife, completed a gill net survey on the upper end of the lake. He later informed me that among the fish caught was a huge Lake Whitefish. The whitefish was 10 lbs. 8 oz. in size. A Lake Whitefish of that size would have broken the Alberta angling record, if it was caught on a rod, at that time.

Since that important bit of information that I was provided with, I had developed an interest in learning more about the lake's giant whitefish population. It would take a number of years before I finally figured out how to fish for these great sport fish. The secret was in the type and size of the fly pattern that a fly fisher must use.

Eventually, I discovered that wire worms were the most popular choice for experience Lake Whitefish fishers and that these fly patterns could be used both in the winter months and also in the open water season. They are easy to tie and you can fish them in a wide range of color combinations that work well for attracting large Lake Whitefish.

My first excursions for Lake Whitefish on the Ghost Lake happen in the winter months and the results were pretty spectacular for some friends and I. My brother Craig was the first to score on these beautiful monarchs of the Ghost. Soon, word spread about the great fishing for whitefish on the Ghost, and the crowds soon followed.

Unfortunately, due to the daily limit of 10 Lake Whitefish on the Ghost Lake, the fishery on some key locations on the lake collapsed. Over the past 2 or 3 years, the fishing for whitefish hasn't been as productive. However, they are still present in the lake. It just takes a little more effort to find them these days.

Catching Lake Whitefish on a fly rod is great fun. They are often called the fresh water "Bone fish" and for good reason. When hooked on a fly, they will make powerful runs that you have to cooperate with, or you will break off your fly. Not a big deal if you are not in a hurry to land this fish.

You can catch Lake Whitefish on hook sizes ranging from size 8 to 12. For leader tippet, it is recommended that at least a 6 or 8 lb. test is used. I like to use an 8 lb. Test Fluorocarbon on the end of my leader.



**Above:** Lake whitefish of 2 to 3 lbs. are common on the Ghost Lake. However, there are some real monsters caught and yet to be hooked on the lake.



**Above:** This is a selection of Lake Whitefish flies from my own fly box. Some of the flies above are wire worms and others are chironomid pupae and larva patterns.

## Ice Fishing The Ghost Reservoir

Over the past 10 years, the amount of traffic on the Ghost Reservoir has increased significantly. Not only are fishers but other recreational enthusiasts now venture out onto the ice to pursue their past times. I recall mornings when you could drive on the ice, up the lake and see only a few lone ice fishing shacks and signs of activity on the ice.

Although the Lake Whitefish catches have declined in the last few years, ice fishers still visit the lake during the winter months to catch fish. Some key fishing areas that once produced excellent daily catches, now produce limited numbers of fish. I have always felt that the catch limit of 10 Lake Whitefish was too generous and that this is why fishing on the lake has been less productive in the last 5 years.

The average Lake Whitefish that could be caught on a days fishing was approximately 2 to 3 lbs., so having a daily limit of 10 didn't make sense to me. In my mind, keeping one or two Lake Whitefish would be more than adequate to make the trip worthwhile, for those that keep fish to eat.

### Right:

An average Lake Whitefish that you could catch on the Ghost Lake was about this size.

### Right:

There was a time when you would only see a few ice fishing shacks on the lake in the winter months. Nowadays, the lake can be quite crowded on an average weekend, when the ice is thick enough to drive on.







## The Royal Stimulator - By Phil Sheezy

As fly fishers we tend to keep information close to the vest. Some people however feel the need to counsel others. One such person was Peter Smallman, owner of Smallman's fly shop in Cochrane.

I had the opportunity to fish with Peter and had hoped with this skilled fisherman again, but due to his untimely passing we were left without his guidance. One piece of advice taken from his store was, "You should try the Royal Stimulator".

I know that the Royal Stimulator is not a new fly, even back then, but it was new to me. It turned out to be a winner. The addition of the red segment in its body is an excellent fly attractor. It's a special fly for small rivers and creeks.

I still think of that day when I was instructed to use this fly. Thanks Peter. It can be used to represent Stoneflies and even Caddis flies. It should also be fished as an attractor fly when there is no hatch going on and you are searching for that big trout lurking mysteriously under the water!

The Stimulator floats so well that it can be twitched or even skittered across the surface without sinking. When it does sink on the retrieve don't be hesitant to fish it under the surface. I have had numerous fish pummel the fly while stripping it back in.

Of course it usually works just fine on the dead drift. Skittering a dry fly across the surface remind me of a fishing trip I was on during one warm summer's day. It was on a small, easily to wade stream; a picturesque river which supported an awesome supply of rainbows, including some large ones. What could be better?



Above: Phil Sheezy battling a large brown trout on the Bighill Creek. I have fished with Phil and his brother Terry on a number of occasions and I consider them both very talented and experienced fly fishermen. Having a small trout stream like the Bighill Creek so close to home is a real benefit to a number of Cochrane fly fishers. If you only have a few hours to spare, the Bighill Creek is a perfect choice.

Adult Stoneflies were floating down one nice section of river, a few kilometres upstream from where I had parked. Nice. I thought I already had the Royal Stimulator tied onto the end of my tippet and all I needed to do was to cast my fly gently on the water, over some sixteen inch rainbows that were nonchalantly gulping down these bugs.

This fly usually never fails on this river. After several nice casts, nothing happened. I decided to slow down and watch the surface feeding. It was hard to pick out the bugs that were being dined on, they were not across the surface. However they were skittering across the water.

Further upstream, I noticed two larger rainbows feeding. I noticed their feeding behaviour closely, it was evident that they were picking off stoneflies that were also skittering across the surface.

I carefully moved with considerable stealth into position, just above the two rainbows. I flipped my fly out onto the water, allowing the current to take it down to the unsuspecting quarry.

Just as the fly reached the feeding zone, I made it owing in an arc over the trout. Bang the fish struck my fly. This would have been a perfect time to have a net handy. Too bad mine was forgotten at home on my basement floor. The fish gobs must have been on my side, because a nice seventeen inch fish was brought to hand. Of course the fish was released unharmed back into the water.

After releasing the trout, it was time to concentrate on the other rainbow further downstream and closer to the bank. I was wondering if this technique would work again, or was the fish spooked by now.

It worked. The second fish couldn't resist that nice meal, sweeping just above it. This fish was even larger than the last rainbow I caught! It was a magnificent, nineteen inch, monster of a fish. It would be a special fish on any river but on this compact stream, it was a fish of trophy proportion. It was an experience never to be forgotten.

That outstanding day on the water is truly one of the reasons why we became fly fishers. This fly never fails me on this river. With that last moment of excitement, it was an excellent way to end a day of fishing. By now the sun was getting in high in the sky, causing the fish to return to their lairs and me to overheat. It was time to go.

I had to ramble over multiple sizes of rocks, around and over fallen trees, and tunnel through thick brush to get back to my vehicle but this trek wasn't hard enough to make me loose that smug smile I had on my face.

On another note, which I shouldn't divulge in my younger (more Zen like) days, I thought that eating a Stonefly might somehow make me a better fly fisherman. I never did resort to such a drastic endeavour, although it seems in vogue now.

In any case, you should try the Royal Stimulator. It is a great looking, fun to tie, dry fly.

**The Royal Stimulator: Phil's Recipe** — Tied on size 8, 10, 12 Hook -  
 • Dacha No. 1270 or Mustad c33s. Thread—Black. Tail: Elk Hair. Body: Peacock Herl with red floss segment in the middle. Hackle: Grizzly palmer over body. Ribbing: Copper wire. Wing: Elk Hair. Thorax: Orange dubbing. Thorax Hackle: Brown and Grizzly palmer on thorax. Make sure you have enough of these in your fly box. Along with some other color combinations.



Above: This photo of a reach of West Nose Creek, in the City of Calgary, is typical of the existing conditions on the stream. Presently, this creek is being planted with thousands of native willows and trees every year, to restore the riparian zone.

Below: A freshly planted poplar tree that was planted along West Nose Creek, City of Calgary.



## Fish Habitat - Wood and Woody Debris

For any experience fly fisher or fish habitat specialist, the value of wood in our trout streams is quite evident. Wood and woody debris provides the best fish habitat on any trout streams where there is readily available.

Besides providing excellent habitat for trout it is also a key factor in the abundance of aquatic invertebrates in a given stream. Where ever wood is submerged, it creates dynamics in the flow of a stream, creating large and small pool habitats.

Wood debris jams and logs are collection sites for spawning gravel which is important for maintaining reproduction in a trout stream. Any submerged wood is ideal habitat for juvenile trout, for the initial years of their young lives.

Creeks that are barren of willow and tree riparian habitat are pretty much void of decent wood habitat, so these streams are ideal for riparian enhancement work, such as planting programs. Planting

both native willows and trees can restore a trout population, over time.

The Bow Valley Riparian Recovery and Enhancement Program has planted over 40,000 native willows and trees along three different area streams since 2014, with the objective of creating wood based fish habitat in the future.

Once a native crop is established on these streams, natural recruitment of more native plants will occur, adding to the new riparian zone.



**Left Photo:** Log jams such as this one, provide excellent habitat for both resident trout and aquatic invertebrates. The jamming of woody debris will scour small pocket pools for trout to hold in. This type of structure also collect spawning gravel for reproduction.

The nutrient provided by dead timber and willows can contribute a considerable amount of nutrients into a trout stream, enhancing populations.

## The Stimulator Dry Fly



One of the most popular dry fly choices for the fly fisher is the Stimulator. It can be tied in a number of color combinations and individuals that fish it usually have their own preference.

The fly was introduced to the fly fishing crowd back in the 1960's by popular fly tier and author Randall Knafmann. Randall Knafmann's book "Tying Dry Flies" got the ball rolling. The cover page of the book had a number of different Stimulator patterns, including the "Royal Stimulator", mentioned in Phil Sheezy's article.

It started to become popular in our area in the early 1990's. Thanks to fly shop owners like the late Peter Smallman, also mentioned in Phil's article, the fly started to become a common go to item. Peter promoted the pattern to those who were looking for a great dry fly attractor pattern.

For fly tiers, it is a joy to tie and it seems that once you get started, the number of color combinations to tie the pattern with, keeps you busy for some time. You can stop and admire what you have tied every now and then, with a feeling of great satisfaction.

The fly is a great choice for finding hungry trout on streams such as the Crownsnest, Oldman and Highwood rivers. It is commonly tied in size 8 to 12—2X dry fly hooks, so it is easy to see on the water, by both the fish and the fisher.

With many fly tier's leaning toward foam body dry fly patterns these days, it is nice to have a traditionally tied dry fly, like the Stimulator, in your fly box. It floats like a cork when properly dressed and the trout usually always loves to eat it. In my opinion, this pattern will be around for a very long time.

## West Nose Creek Fisheries Restoration Program

It was a busy year for the West Nose Creek Fisheries Program. The good news is that some major headway was made this season to learn more about the existing brown trout fishery and also a few small enhancement projects to speed up the recovery of the trout population on the creek.

The following list includes some of the main projects for this year on West Nose:

- Complete an angling survey.
- Remove obstructions to allow spawning trout migration.
- Conduct a spawning survey.
- Complete a riparian planting program on the stream.

All of these projects will help in the long term fisheries recovery on West Nose Creek. The key is too keep at it.

There seems to be a noticeable improvement every year in the creek's trout population. This could be a good indicator that small projects like keeping the stream open for migration is already producing a positive result.

It is my own belief that the flood events that occurred on the creek this summer, helped out in recruitment of new brown trout numbers moving up from the Bow River, but this is only pure conjecture, maybe I am being a little too optimistic. However, the record spawning this fall helps out this theory.

I feel pretty good about what a few volunteer hours accomplish, if you have an idea of what type of work project will benefit the stream's trout. Thanks to the help of another volunteer, we did ok this year.

## Future Spring Creek Trout Fishery

With over 20 kilometres of stream channel located within the City limits of Calgary, West Nose Creek would be a prime spring creek trout fishery. It is only a matter of time and a lot of effort to make this happen.

The existing brown trout population in West Nose Creek has the potential to increase in

numbers, as the creek is slowly rehabilitated.

The brown trout can successfully spawn and incubate eggs on the creek, if the water quality is maintained. As the riparian recovery program continues over time, there will be adequate habitat for the trout population to live in the creek.



Left: West Nose Creek Trout.

## Winter Pool Habitats on Millennium Creek

During the Christmas holidays I visited Millennium Creek, hoping that the stream was ice free and I could take a few photos. The weather had warmed up a bit, so there was a good chance I could inspect the pool habitats that were built back in 2007 and 2008.

When I got to the creek, the stream was ice free and there was good flow, indicating enough warm spring water was helping to keep the stream temperatures warm enough to keep the ice confined to the shoreline.

The pool habitats looked great, still deep enough to provide good wintering habitat for the small resident brook trout in the stream. I did manage to spot a few trout, holding in the cover of the pools. It was great to see the pools being used for a winter living space.

The pool habitats were built using a rock and log v-weir design that Bow Valley Habitat Development had created, for low gradient conditions on the creek. After 9 years the v-weirs were still holding up and doing exactly what they were designed to do. Provide deep water habitat for trout.

The low profile of the v-weirs focuses the flow into a narrow thalweg that keeps the pools scoured, even when there is minimal flow in the stream. During high flow events, the pools will deepen to their maximum depth. All of this occurs with only a minimal hydraulic jump or drop in the stream channel's water level.

Submerged cover habitat was built in the pools during construction, to provide additional cover for trout. Brook trout like these pool habitats.



Above: You can see in this photo that the log v-weir has a very minimal hydraulic jump, yet it maintains a deep pool habitat with lots of cover for resident trout.



Above: A December photo of a large log v-weir pool on Millennium Creek.



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## Bighill Creek Stream Bank Stabilization - Erosion Sites

There are a total of 58 stream bank erosion sites on the Bighill Creek that are undergoing stabilization plantings. This is all a part of the "Bow Valley Riparian Recovery and Enhancement Program". The program was started in 2014, but a number of plantings were completed on the Bighill Creek by Bow Valley Habitat Development and its partners prior to this.

The stabilization sites are showing the first real benefits of riparian recovery plantings of native willows and trees on the Bighill Creek. Over the past few years, a tremendous amount of silt has been prevented from entering the stream channel, thanks to the planting program. The new root systems from the plants is helping to hold the eroding soil in place and over time this will improve as the native plants mature. The 58 erosion sites are located on the outside bend of the stream channel, where the main velocity of the creek's flow is deflected by the loose clay soil.

By planting right at the water's edge on these sites, the toe erosion process is halted and over time the steep stream banks will stabilize with the new plant growth. Eventually, the native willows and trees will also provide fish habitat.

This cost effective method of stream bank stabilization has proven to be the best approach at tackling this problem on Bighill Creek. It is also natural in appearance, with no evidence of human involvement. Unlike rip-rap armoring or crib wall construction.

It will take 5 or 6 years after planting, before the crop is well established and it is noticeable in the landscape, but getting the plants started is the priority in the program. There is a good supply of photos of many of the sites that can be used for before and after comparison, in a few years time.

Just recently, I visited some of the sites on the Bighill Creek, to take a few photos of what the new willows and tree plants look like this fall of 2016. They are growing very well so far.

Without the leaves, the stems and tree branches of the new willow and tree crop stand out along the water's edge on the stream. Due to the high clay content in the soil along the stream, it is nice to see that the plantings are doing so well. Over time, the dead leaves and debris that the plants catch along the stream, will enrich the soil and insure good future growth.

The sites that I visited were planted in 2014, 2015 and again this year. On some of the sites, another planting will take place in the 2017 season, to fill in some of the gaps on the erosion sites. Multiple plantings is the key to success in this approach to stream bank stabilization work.

A variety of native Salix willow, red-osier dogwood willow were planted at the sites. There were also some Aspen and Balsam poplar planted on the banks. This selection of native willows and trees that are indigenous to the Bighill Creek will help maintain the stream's historic bio-diversity.

The erosion of stream banks is the most severe on the outside bend of the stream channel, especially on oxbow where the channel abruptly changes its course. During high flow events, usually in the spring of the year, toe erosion occurs at the base of the stream bank, washing away huge volumes of silt and clay into the stream channel.

Root systems from newly planted native willows and trees will create a stability in the eroding clay and soil and help hold it together. As the plants grow, the stream bank eventually stabilizes and this makes a big difference in the water quality in the stream.

This is good for the fish and the food that they feed on.

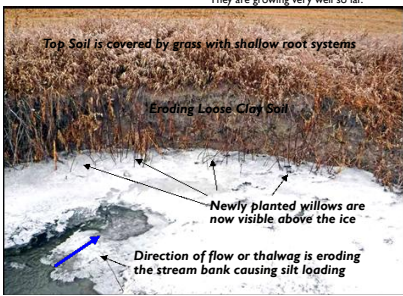


## Willow and Tree Plants Along the Water's Edge

It has been a pleasure to watch our native willows and trees grow over the past few years. The plants are slowly changing the landscape along the streams in the program. Soon, wild song birds will start to nest in the planted crop and the fish habitat created along the water's edge will be occupied by resident trout.

The shade provided by the new plants will help to maintain cool water temperatures in the streams, and the planted riparian zone will also improve the water quality. Eventually, when branches bend down into the water in the stream channel, the constricted flow will help to clean the streambed. Over time, this expose the gravel, cobble and boulders that are now hidden beneath the silt in some spots.

It is exciting to think about all of the potential that a new riparian buffer will create in the future years.



Left Photo: The appearance of smaller brown trout in the Bighill Creek in recent years indicates a sustainable reproducing population in the stream. Successful incubation of brown trout eggs from the fall spawn is better in some years, more so, than in others. Water quality during egg incubation is the key factor in a successful hatch.

## Bighill Creek's Trout Fishery - Update

There should be a noticeable difference in the brook trout angling results in the year 2019 and 2020. By then, the new generation of trout will be large enough to be caught on a fly. I look forward to this improvement in catch results for the stream.

Over the past 10 or so years, the brown trout have spawned in the main-stem of the Bighill Creek. It is hoped that eventually, the brown trout will show up on the upper Park Spring Creek during spawning season, but this has not happened yet. So in the mean time, reproduction for brown trout will be more abundant on the upper reach of the creek and eventually be spotted spawning in the clear waters of the Park Spring, where the egg incubation and hatch results will be far better.

## Expectations for Jumpingpound Creek Rainbow Spawn

With the El-nino over and the start of El-nina on the upswing, I am hoping for more water in area streams during the spring fresher season. This would be good for migrating rainbow trout during the spring spawning season on the Jumpingpound Creek.

There has been a noticeable reduction in the numbers of rainbow trout on this reach of the Bow River, between the Ghost Dam and Bearspaw, in recent years. The run of mature trout need good passage up the creek in the spring to reproduce. Both run-off and spring rains.

This last year, the spring was dry and low flow conditions made it very difficult for migrating rainbow trout on the creek. It is my hope that in the spring of 2017, conditions will be just right for passage up the JP Creek, during the early spring migrations.



Above: A spring caught JP strain of rainbow trout, caught in the Bow River.

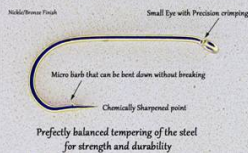
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There are three important factors in maintaining a healthy sport fishery on Bighill Creek. The first is volume of flow, secondly water quality and third is habitat. Without any three of these important ingredients, the Bighill Creek would not be a productive trout fishery. Fortunately, the volume of flow in the stream and the habitat are relatively good in recent years. However, the water quality is relatively poor, due to cattle activity upstream on the system. Despite this lack of clean water, the trout still seem to be adapted to the existing conditions. On the lower reach of the creek, a lot of work has been completed to improve both the habitat and water quality over this past decade. Improvements have been noted in these two areas of improvement and as a result the fishery is on the upswing. This fall, record overall brook trout reproduction on key spawning tributaries to the main-stem of the creek were documented. On the three key spawning tributaries, a total of 108 brook trout redd were mapped and recorded. There was substantial spawning that occurred on the main-stem of the BH Creek, but no accurate spawning survey was completed. The record spawning year will show a significant increase in the brook trout population in the following years on the Bighill.

## HOME







All of the trout photographed in this magazine are carefully released back into the water.

## Bull Trout

I first became aware of the technique used to fish midge pupa fly patterns back in the 1980's. At the time, my plans were to fish the trout lakes of Kootenay Valley in British Columbia, so I knew that doing some research on fishing Chironomid patterns would be a good idea. Before I headed out to BC...

From all of the reading that I had done on fishing BC trout lakes, I was convinced that gaining a little knowledge on fishing midge patterns was a must. Especially, during the spring of the year, when trout focus on this small aquatic invertebrate to the exclusion of everything else. I dug into my collection of fishing magazines and bought a few books on the subject, with a real sense of exuberance. This was just typical of my approach to anything to do with fly fishing at that time.

All of the effort paid off big time, and on my first journey to the BC lakes stacked up plenty of great memories of fantastic fly fishing for both rainbow and brook trout. I fished a number of lakes that first year, including Summit, Whitehall, Premier and White Swan, to name a few. The selection of lakes to fish is even more huge in the Kamloops area of BC.

## Fishing the Midge Pupa Pattern

That was my first introduction to a style of lake fly fishing that has since become a valuable piece of knowledge, especially for the still water trout fishing experience. In addition to this, I have found that fishing midge pupa on rivers and streams is also very productive. The Bow River is the first river that comes to mind for fishing chironomid fly patterns.

Over the years, I have fished the pupa patterns in hook sizes ranging from size 20 to size 10, a few times on larger and small hook sizes have caught trout. Trout are often very picky about the size of offering that you present, so hook size is important.

The colors for this aquatic insect can cover a general selection tied in olive, gray, tan, brown, black, green and red. Many times, the hue of a particular color is very important.

Many lake fly fishers, myself included, have large midge pupa fly boxes, to insure that we have that important color and hook size on hand. Fortunately, the chironomid is an easy fly pattern to tie, so you can whip off a huge selection in a shorter time, than when compared to other fly patterns. It is just a matter of having the right materials on hand.

The number of trout lakes in our area is relatively small, so fishing rivers and streams comes into the choice of waters to fish midge patterns. I have often fished midge pupa on the Bow River with great success. It is amazing how large a trout you can catch on such a small fly pattern.

Bow River trout do not shy away from tiny trout fly patterns, so you would be amazed to discover this on your own, if you haven't already.

During the winter months, you will find that on warmer Chinook days the trout on the Bow will feed heavily on the small midge, pupa and adults. You will see the tiny midges hovering over the surface of the river throughout the winter months, if the weather is warm enough.

This winter, I sat down at my fly tying station and replenished my stock of midge pupa fly patterns. I still have a way to go for tying particular fly hook sizes and colors, but it is a nice break from tying some of the other more common fly patterns that I normally tie.

You can learn more about this important trout fly on the internet. No need to buy the books that I did, when the necessary information is only a touch of the finger tips away.



The Midge Pupa is a long slender insect with a segmented abdomen or body



Emerging Pupa



Above: A nice Sparrow's Egg cutthroat trout that was caught on a midge.

## Millennium Creek Willow Crop - 10 Years After Planting



Above: This photo was taken in December 2016.

In 2007 and 2008, native willows and trees were planted around pool habitats and certain areas of the stream channel on Millennium Creek. This planting was part of the overall stream restoration program on Millennium.

This year, it was hard to see the actual stream channel through the cover of native willows that had been planned on the creek. The best time to take photos of the plants is in the winter months, with a cover of snow, so the photos on both sides of this article show how the plants have grown over the ten years or so since they were planted. In the photos, you can see how the spruce tree that was present in both photos has also grown in the last decade. There is a little more water flowing down the creek than there was when the restoration program was completed, so this is also good to see.



Above: This photo was taken in 2008, one year after planting.



Above: A variety of different color chironomid pupa fly patterns that I tied up this winter. The small tuft of white yarn is used to imitate the gills of the midge pupa. The midge pupa is normally fished on a dry fly line, using a strike indicator.

Above: Fly fisherman Jake Gotto, battling a Sparrow's Egg cutthroat trout. Small lakes like Sparrow's Egg are one of a number of mountain lakes found in our area of the Bow River Watershed.

## Perdigons - An Easy Tie of a Productive Fly - By Ian George

Perdigons were created by the Spanish, designed to fish fast turbulent waters. Living along the upper sections of the Bow River the perdigon has become a "go to" pattern for me. The tungsten bead and lead underbody, combined with its streamline shape, make it sink like a rock with practically zero water resistance.

The bodies of the perdigon can be of any color the flyer desires. It is easy as using just a thread body, then coating the fly with UV resin; opposed to tying in a tail and using synthetic materials to build the body. The flexibility in tying the perdigon is also what attracts new fly tyers to this pattern...an easy tie of a productive fly.

The reason these flies are so productive is because they are on the bottom and stay on the bottom, when cast upstream, until the swing out at the

end of a drift. Most anglers don't realize when they are fishing nymphs that their flies aren't heavy enough and they are not drifting on the bottom.

Another realization is that their flies may be momentarily on the bottom, but are easily being swept off the bottom and not drifting in the feeding lane. At certain times of the year, not having any flies in the feeding lane can be detrimental to your chances of hooking a fish.

With the experience that I have gained fishing this pattern, I've found that nymphing with an indicator or high riding with a perdigon indicator has been my most productive approach. While fishing with an indicator, I set the position of it at 1 1/2 times the depth of the water being fished and cast upstream, until the swing out at the

Publisher's Note: Ian George is a Cochrane based competitive fly fisher that won a silver medal in the 2016 Alberta Rivers Championship Competition.

Immediately mend the line upstream as the flies drift down.

When the indicator is at a 45 degree downstream I let my line tighten and swing the flies to the shore. Before the swing, I make a 15-20° strike loop of fly line, hold in the line stripping hand. Make sure to hold the rod firmly, as the swing of the flies can produce some very strong takes. When a fish takes on the swing, I set the hook while releasing the strike loop and set the hook again.

To me the very best aspect of this pattern is its dependability. Fishing with patience is always important. The weight of this pattern gives you more contact with your flies, especially while fishing without an indicator. A higher level of contact with your flies creates more confidence in your fishing technique, which creates better results, if you are patient.

Perdigon Nymph pattern tied by Ian George



Author recommended perdigon recipe:

- Hook - Hends BL154 rig hook sizes 10-16
- Thread - Ultra thread 70 fluorescent fire orange
- Bead - slotted tungsten bead (suit to hook size)
- Tail - Coq de Leon (tail is optional)
- Body - 10 lead
- size small Halo tinsel in orange
- UNIMylar #12 pearl
- UV Resin



Right Photo: Ian George holds up a nice bull trout caught on the Oldman River. The trout was safely released back into the stream.

Photo by Sarah Murphy

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## 2017 Volunteer Riparian Planting and Stream Maintenance

The Bow Valley Riparian Recovery and Enhancement Program is dependent on partnership support to cover the cost of native plants and a volunteer force to do the planting. During the 2016 season, a total of 310 volunteers hours completed the planting program. The other important volunteer contribution was in stream maintenance work, which mainly involved clearing obstructions that blocked trout migration.

Presently, Bow Valley Habitat Development is organizing another season of volunteer and partnership involvement for the 2017 work program. It is hoped that this next season's accomplishments will match or exceed that done in the 2016 season program. It is very difficult to predict how much volunteer involvement there will be, in advance of the planting season, but I am very optimistic it will turn out to be a good one.

Bow Valley Habitats Development has plans to involve more junior student groups in this year's program, so we will see how things develop during the spring of 2017. Anticipating over 10,000 native willows and trees every year is challenging, but so far the support has been significant. I will keep you posted on how things develop, in the June issue of Stream Tender Magazine, so check this out in the spring. The June issue will be available for review on June 1st, 2017.

" Volunteer planting support has resulted in the planting of over 40,000 native willow and tree plants over the past three years of the "Bow Valley Riparian Recovery and Enhancement Program". This total of native plants that have been planted will exceed 50,000 native plants in 2017".



## Partners in for the Long Haul

Over the last 30 or so years, Bow Valley Habitat Development and its partners have accomplished a lot of riparian and fish habitat enhancement work in our area. This would not have been possible without the full support of corporate and NGO involvement. There has been plenty written about the volunteers that also made a major contribution in time, but the partners that lead the projects sometimes don't get the credit that they are due.

- In recent years, the following partners have been supporting the grassroots operations of BVHD every year:
- Inter Pipeline
  - ATCO
  - The Town of Cochrane
  - The Cochrane Foundation
  - The City of Airdrie
  - The City of Calgary
  - The Department of Fisheries and Oceans Canada
  - Shell Canada
  - Evergreen Canada

Since 2014, all of the above have been funding the Bow Valley Riparian Recovery and Enhancement Program and this may also be the case for the 2017 planting program. Already, a number of the partners have committed funding to make this happen. At this point in time, BVHD already has funding support to plant approximately 5,000 native willow and tree plants. I am confident that this will grow in numbers by the time the spring planting season arrives in 2017. This is great news for the program and I am really looking forward to another successful year.

What ever happens in the future, Bow Valley Habitat Development and Stream Tender Publications will continue to update all of those interested, in the progress of the programs that have occurred over the last 10 or more years. I think it is important to report on how all of the money and time spent has produced a positive result.

As an avid fly fisher, I take great pleasure in visiting all of the area streams that we have worked on in the past. To me, it is extremely interesting to see how these trout streams have transformed over the years. Catching trout from these waters is all of the reward that any volunteer that enjoys the sport, could realize.

Now that the trout fishery on Bigbill Creek is recovering, most of my attention will be redirected toward West Nose Creek in the City of Calgary. However, work on the Bigbill Creek system will continue. The monitoring of trout reproduction by conducting spawning surveys is very important, so this will be high on the list.

The stream maintenance work on all of the area streams must be continued to insure the ongoing recovery of the trout fishery. It is something that all of the volunteers look forward to, primarily because it is also good fun. It is kind of a social event for area fly fishers.





- West Nose Creek Riparian Planting Update.
- Good News on the Ghost/Waiporou Watershed.
- Good News for the Burnt Timber trout fishery.

March Issue — 2017

## Bull Trout

### "Small Creeks, Small Flies – Big Trout"

The late afternoon is not the best time of day to fish some streams, but as trout off work often dictates, it was the opportunity for me to fish one of my favourite brown trout streams. It was the first week of July and at the last minute, after a busy early morning and mid day, I found myself walking through the tall canary grass to the small creek.

I still had a streamer wet fly on the short leader of my 7.5 foot—3 weight fly rod, so I decided to fish the pattern for starters. Using a streamer wet fly is usually a good bet on this stream, especially at this time of day, with no sign of any hatches on the water.

Working down the stream, casting to every likely looking hold or habitat, there was something that drew my attention right away. As I ploughed my way through the tall canary grass, small leaf hoppers or jassids were popping off the grass in every direction. Some were landing on my high waders, where I could clearly see their size and color.

These particular terrestrial bugs were a bright chartreuse in color and they were about a size 20 hook size. The jassids can range in color and size. In color they can be a light tan, chartreuse or lime green, often depending on the time of the spring and summer. Trout love to feed on this particular insect, when they are abundant. Especially on windy days when many of them get blown into the water.

As is often the case, as I walked along the stream bank, a number of them were ending up on the surface of the creek, which I then continued to fish a float downstream from my position. Rounding a bend in the channel, I caught a glimpse of a disturbance, just below and out from a willow bush that was hanging down into the slow flowing water.

Something was pushing the surface of the water creating subtle waves, barely noticeable. This had to be a trout I thought. I stopped and got out my cany grass, hoping to get a glimpse of a trout rise. I have tried this many times, but it is very difficult to catch the act on a slow camera like the one that I am using. Maybe some day I will get lucky with this.

I zoomed in on the spot where the trout had stationed itself, probably feeding on the small leaf hoppers that I had forced into the creek. The next time the trout came up for a jassid, I pushed on the camera's shutter release, but at the time the camera made its customary sound of recording the photo, the trout had already eaten the bug.

I took only seconds to take another photo and this time I could clearly see through the viewer, the snout of the trout break the surface, as it sucked in another leaf hopper. Checking out the last few photos on my digital camera, I could see that the shutter release was not quick enough to capture this rising trout. I decided to take a photo of the spot where the trout was coming to the surface and then get serious about trying to catch it.

Normally, I carry some of these leaf hopper patterns in my fly box, so it didn't take me long to find one of about the same size and color of the ones hopping into the stream. A light leader was tied onto my existing leader and I fished on the small size 18 foot fly pattern and gressed it with a film of floatant.

After my efforts to capture a photo of the rising fish, I wondered if it had spotted me and the show was over. However, on the first good cast that landed a few metres upstream of a perfect drift, the trout tipped in my fly. I set the hook very gently with my light leader being a concern.

Just after the hook set, I could see that it was a brown trout creek beneath the water. The battle only lasted a few seconds before the brown broke me off.

I use a few strands of the buck tail for legs as well as the shell back. It may be interesting to note that I returned to the same reach of stream in the following spring and caught the large brown trout. I am pretty sure it was the same fish, because it was in exactly the same spot. The brown fell for one of my fly patterns and I was able to put up a valiant fight, before it was brought to the net. I took a photo of the trout before I released it back into the stream.

on some submerged wood or debris. That hurt. I love to catch large trout on small flies with light leaders, but it is a tough game on the past few weeks. With so much submerged wood and weeds to deal with. Fortunately, I had another few leaf hopper patterns in my fly box that day.

After that encounter with the large brown trout, I spend a lot more time stopping to inspect the stream channel a head of me. As I continued to move downstream, I made an effort to kick the shoreline canary grass to send more leaf hoppers off to their fate on the surface of the stream. This paid off for me that day. By the time I had finished my dry fly fishing that afternoon, three more trout were hooked using the leaf hopper pattern.

I would return to try and catch the large brown trout on another day, especially having taken a photo of where the trout was holding. This is the nice thing about fly fishing small streams like this one, you will often find the same trout at the same spot in the stream channel, on future trips.

It was great fun fishing the small jassid fly pattern that afternoon. The nice thing about this particular offering for trout, is that they are available all day and the trout will usually take them when ever they float by. Fishing jassids is similar to fishing ant patterns in the summer months. The leaf hopper is an important terrestrial that many fly fishers overlook.

In the days following my fish on that day, I tied up another good supply of the leaf hoppers for the fly box. I like to tie them short on a larger sized hook, because they are so small a bug. Dyed buck tail has worked very well for me for tying this pattern, I use a few strands of the buck tail for legs as well as the shell back.

It may be interesting to note that I returned to the same reach of stream in the following spring and caught the large brown trout. I am pretty sure it was the same fish, because it was in exactly the same spot. The brown fell for one of my fly patterns and I was able to put up a valiant fight, before it was brought to the net. I took a photo of the trout before I released it back into the stream.

### West Nose Creek Planting Program Update

Among my travels this winter, I visited West Nose Creek a few times, to check out the willow and tree crops that have been planted on the past few years. There is a site just upstream of the Stoney Trail overpass that is showing great results from a 2015 planting.

The soil PH level is just right for growing trees, so the plants are coming along very nicely. After almost two years of growth, they are visible along the water's edge, especially with the riparian grasses flattened down by winter snow. The willows are approximately one metre high and this next growing season, they should really take off. If the beavers don't get to them first.

An important thing to remember, is that even if the beaver's grazes on the willows, they will continue to grow and sprout new branches. By now, the root systems are well established, so recovery from predation is guaranteed. This is a comforting thing to know.

On other areas of the stream's channel, where the PH level is too high to support good growth, there are still enough plants that have taken root, so over time and more plantings, these areas will also support a good riparian cover of both willow and trees. The leaves and branches from these surviving willows and trees will enrich the soil and bring down the PH level to where it is just right for native plant growth.

Over time, these areas of the creek will have great habitat for the resident brown trout population, so this is something that I also really look forward to. Success of the riparian recovery program is the ultimate goal and we are well on our way to achieving it.



### Ghost Watershed Alliance Makes Headway

The Ghost Watershed Alliance was formed in 2002, with a focus on the preservation and enhancement of the ecology of the Ghost River watershed. In recent years they have been active in a number of habitat enhancement programs and studies on the watershed of the Ghost and Waiporou stream systems.

The group has also advocated for regulation changes in the management of off-road recreational users' activity in the watershed, which has helped in the protection of native trout species in the streams throughout the area. Their involvement has resulted in some very worthwhile changes.

Right Photo: Unregulated off-road traffic in the Ghost Watershed has been a problem for a number of years. Recent regulation changes will help.



### Waiporou Creek Cutthroat Trout - More Protection in Place

As of August 2016, there are new off road regulations in place on the Waiporou Creek system to protect the native cutthroat trout populations. These regulations include the closure of certain trails, the addition of designated stream crossings and the building of a bridge over Margaret Creek.

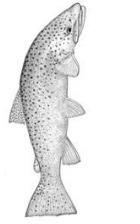
The new regulations will protect the Margaret Creek cutthroat trout in a big way. This will happen to keep off-roads out of the stream channel during the spring spawning period, which happens in May every year. This spawning event occurs during the May long weekend, which in the past was when most of the off-road activity impacted the stream's water quality.

I was really excited to hear about these new changes, because the long term benefits will see an improvement in native cutthroat trout populations on the stream system. There is especially a noticeable increase in recruitment of new generations of cutthroat trout, due to the improvements of water quality during trout egg incubation.

May was a vulnerable time for the trout, because large volumes of mud and silt would be loaded into the creek, as a number of stream crossings. One of the main crossings was only metres upstream of a key spawning habitat on the creek. In 1998, I videoed cutthroat trout spawning at this particular spot on the creek. That trail is now closed for off-roads permanently.

On the lower end of Margaret Creek, a small bridge will be constructed in the fall of 2017, so this will be of great benefit to cutthroat trout moving up the creek in the spring of the year. Simple measures such as this can make a huge difference in protecting our native strains of cutthroat trout.

I look forward to monitoring the cutthroat trout populations on Margaret Creek in future years, which I fish by rod in hand. It has been a few years since I fished the creek and I am interested in returning to fish it, without having to witness the ongoing damage that was happening annually. This is definitely a step in the right direction.



Above: The large brown trout was holding just off the point of the foam, slipping in leaf hoppers. I had forced the small bugs into the creek from my walking the creek from an upstream approach.

Above: This is the brown trout that I caught in the same spot, the following spring. It may have grown a bit over the fall and winter, but it was still close to the same size.

### The More Friends a Trout Stream Has - The Better The Chances of Protecting It

## HOME

In a recent conversation with a friend and fellow fly fisher, I heard him complain about the increase in angling pressure on some of his favourite haunts. I had to agree with him, because I have noticed an increase of fly fisher's on many well known trout streams in our area. This can be a hard mouthful to swallow, but as a population grows, so does the pressure of more sport recreational anglers.

These new fly fishers have the same rights as we all do, to enjoy casting on a good trout stream. The best approach in my mind, is to accept this reality and learn to live with it. Or, if you don't like the competition, find another trout stream. There may be less trout to catch, but at least you will be alone on

the water. The more good trout streams that there are, the less pressure they will receive.

For me personally, I find a positive aspect in this modern day dilemma: the more fly fisher's that enjoy a trout stream, the more friends it gains. This can be especially important for the survival of a trout stream. If a particular problem arises that threatens a favourite trout stream, the more advocates it has looking out for it.

Outdoor writer Bob Scammel wrote about this many years ago and I thought that he carried a very good point. Since that time, when I read this philosophical approach, I have witnessed it in action, on a very large scale over the years. This has also

helped motivate me on a number of local issues that I felt compelled to address.

The alternative to this approach is too do nothing and the result could be to watch a healthy trout stream die over time. I have personally witness this and let me tell you that it is a disturbing thing to see.

A good example of two areas in trout populations are Grand Valley Creek and Bighill Creek. The latter is now on its way to recovery, thanks to some local fly fisher's that got involved. There are many other streams that are also on the verge of collapse and these need all the friends they can win over. It is my hope that this will happen.

Margaret Creek Spawning 1998  
If you would like to check out the Youtube video of spawning cutthroat trout on Margaret Creek taken in 1998 go to this link: <https://youtu.be/CWJfENFY0>.

### Burnt Timber Cutthroat Trout Management - Changes Made

With the west-slopes cutthroat trout listed as a threatened species in our province, it was a puzzle to me why there was a 2 trout harvest limit on Burnt Timber cutthroat trout on the system and the fall potential of a healthy population of both is yet to be realized. It is a bit of a quandary knowing that a stream system could be such a great sport fishery without any such catch and release policy that was put in place in 2016.

Years ago, you could only find cutthroat trout on the south fork of the Burnt Timber. They are also present on both forks and in the Burnt Timber area.

Up until last year, I would cringe any time someone mentioned that some angler trout will be left alone to multiply, there would be a significant increase in the size of the fish.

Now that the cutthroat trout will be left alone to multiply, there would be a significant increase in the size of the fish.



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- Monster cutthroat trout on lower Kananaskis Lake.
- First trout hatch for 2017 documented.
- Whirling Disease - A new threat to our sport fisheries.

## Bull Trout

### "Lower Kananaskis Lake's Giant Cutthroat Trout"

In one of my books, I mentioned that historically the Stoney Nation would make a pilgrimage up the Kananaskis Waterfalls between the two lakes, to harvest giant cutthroat trout that would stack up below the falls. I am assuming that this was done in the spring, when the trout were migrating up the river to spawn.

This historic information was gathered during research for my book. The story was documented during a study of the Banff area fishery, prior to the construction of the Banff Hatchery. So this means that the cutthroat trout in the lower Kananaskis Lake were native to the lake. Whether any remnant population of the native cutthroat trout of the lower lake are still present is speculation.

Nowadays, the cutthroat trout caught in the lower lake are most likely all from the stocking program completed by Alberta Fish and Wildlife. All of the cutthroat trout that I have witnessed being caught by anglers on the lower lake, appear to be pure strain. The stocking program uses a pure strain of Spry Lakes cutthroat trout that is used on all high mountain lakes in our area.

Historically, there were a pure strain of cutthroat trout in both the Spry Lakes and the lower Kananaskis Lakes. Whether they were the same strain is something that we may never know, but I suspect that they must have been at least close in DNA. Cutthroat trout escaping from the Spry system could easily have made their way down the Bow River and

up the Kananaskis River to the lower lake.

Whatever the case may be, there are some very large cutthroat trout to be caught in the lower Kananaskis Lake. The Upper Kananaskis Lake was stocked with cutthroat trout back in the early 1990s, but I have yet to hear of any giants being caught. I suspect there are some large cutthroat trout have been caught in the Upper Lake and I have not heard about it.

It is nice to know that a fly fisher or ice fisher has the chance of catching such a large cutthroat trout in a nearby lake. All of the cutthroat trout need to be safely released back into the lake, so the one of the trout shown in the photos included in this article may well be still swimming around the lower lake these days.



**Above:** This monster cutthroat trout was caught and released by Jake Gotta on the Lower Kananaskis Lake. Cutthroat trout typically have thick bodies.

### Left Photo:

The Lower Kananaskis Lake is a great shoreline fishery, with many nice bull, cutthroat and rainbow trout being caught from the shore by fly fisher's. There are many kilometers of shoreline to fish and only the popular spots can get crowded.

The large trout in this lake make a great destination for those that strive for a trophy size trout and the beautiful panoramas and mountain landscapes.



**Above:** This huge winter cutthroat trout was caught and released by Bruce Welsh (proudly holding the trout) on the Lower Kananaskis Lake.

### "2017 Trout Stocking on Small Ponds in Jeopardy"

Recently, a trout was identified with whirling disease on a local trout farm that supplies many area ponds with rainbow trout. The trout rearing operation has been closed until the problem can be resolved. This will have an impact on the 2017 stocking program for many trout pond owners in our area.

There may still be trout stocking suppliers that can provide fish for stocking in 2017, but the demand could exceed the supply. Furthermore, some of these other trout farming operations could be temporarily closed until there entire stock is tested for whirling disease.

Whirling disease was first discovered on the Bow River watershed in Johnson's Lake in Banff National Park, recently. Since that time, other cases of the disease have been confirmed in the Bow

River further downstream. This has prompted major concerns with sport anglers and fisheries managers alike.

Juvenile rainbow trout are especially vulnerable to whirling disease, so spawning habitats and fish farms are areas of great concern for the spread of the disease. The whirling disease attacks the spinal cord on trout and deforms the tail area on the fish, which causes the trout to swim in a circular direction, thus the name whirling disease.

South of the border, on some well known trout streams, the disease has caused a major collapse of the trout populations. On other river systems, it has not been as severe. The degree to which it will affect the Bow River watershed is still yet to be determined, but measures to contain the diseases spread are being undertaken.

### How Anglers Could Help Fisheries Managers Study the Spread of Whirling Disease

It would be nice if anglers could help fisheries managers contain the spread of whirling disease in our local trout waters in some way. After all, we are major stakeholders in the fisheries resource and I am confident that most of us are interested in doing something to benefit the protection of our trout fisheries.

For me personally, I feel that if I can help fight the spread of the disease in any way, I would. There were a few things that came to my mind about what I could do as an angler.

For starters, knowing how big an area that the spread of infected trout is, would be a valuable bit of information to fisheries managers that are presently focusing on this objective. By collecting samples of infected trout and documenting where and when they were captured, we are something that anglers could do to assist their work.

Trout that are infected with whirling disease have deformed spines, usually on the tail area of the trout, so they are visibly distinct from a healthy trout. These deformed spines do not affect the trout as being infected with the disease, but there is a good chance that this should be investigated further by regional Fish & Wildlife biologists.

Can many of our local trout streams and some lakes, there are zero harvest catch limits in place. So if an angler catches a trout with "tell tale" signs of being an infected trout, should we be releasing the trout back into the water? In my opinion this would be a valuable bit of information to fisheries managers that are presently focusing on this objective. By collecting samples of infected trout and documenting where and when they were captured, we are something that anglers could do to assist their work.

If there was a special provision in the fishing regulations that allowed an angler to kill the trout and drop it off at the nearby Fish & Wildlife office for testing, this approach may be useful to our studies. The department could test the trout for positive results of whirling disease.

Also, by removing any infected trout from the water body should help containment of its spread. I would feel pretty guilty about releasing an infected trout back into the water. If you catch a trout stream, with the thought of it being an infected fish. Especially knowing that it may result in further spread of the disease.

If a provision was added to the fishing regulations with this specific condition that deformed trout could be dropped off at the fish and wildlife office, I think that most anglers would participate in such a program. I know that I would.

The reality of having such a dangerous outbreak of whirling disease in our home trout waters is a depressing thought for all anglers and having such a huge number of help out in the fight to at least contain the spread is a worthy cause.

This is a proposal to help out, all that we need is permission to do so and we will.

### Whirling Disease Found in Local Waters

Last August, whirling disease was found in 5 samples taken from the Bow River downstream of the Ghost Dam. Another sample trout that tested positive was found on the Jumpingpound Creek, upstream of the confluence with the Bow River.

Finding a case on the Jumpingpound Creek is a major concern, because the JP Creek is the only spawning tributary for rainbow trout on this reach of the Bow River, between the Ghost Dam and Bearspaw Dam.

Having the disease in the Jumpingpound Creek is especially bad news for the

Bow River's rainbow trout populations, because juvenile rainbow trout are considerably more vulnerable to infection. This could impact the future rainbow trout fishery in our reach of the Bow River, in future years.

Now that the whirling disease outbreak has made its way downstream on the Bow River system, to where rainbow trout populations are present, the spread of the disease will be more dramatic.

Rainbow trout are especially vulnerable to whirling disease and its spread. Recent news of the number of cases of infected trout is very disturbing.

### How Long Has Whirling Disease Been in the Bow River Watershed?

On August 23, 2016, the first case of whirling disease was confirmed to be on Johnson's Lake in Banff National Park. The testing was carried out by the Canadian Food Inspection Agency. In the same year, a total of 41 cases were confirmed on the same Bow River watershed, as far downstream as Bassano.

The big question is: How long has the disease been present in the Bow River watershed? Having positive test results on areas all along the Bow River as far to the east of Calgary as Bassano, leads me to believe that the disease has been present in the Bow River system for some time and that it didn't

just suddenly appear this last year. It could've possibly have spread that fast.

My next big question is: Why the outbreak wasn't detected on the system earlier on? Wasn't there an ongoing testing program to monitor our trout streams in this province? I know that educational advertisements have been published in the fishing regulations for years, educating the public about measures that anglers should take to prevent it from entering our province.

You would think that testing studies would be carried out on an annual basis. Also, a better line of communication between anglers that may have caught an infected fish, and

fisheries managers, so that they would have a first alert about a possible infection case.

Anglers are a valuable source of information about our local fishery and the streams where they live, so you would think that regional biologists would have established a good line of communication with area anglers to provide them with important information.

I recall a time when the area fish and wildlife biologist made a point of tapping into local expertise for gathering valuable information about the area's fishery. However, these days this is not the case. The majority of anglers that I know, don't even know the names of their regional biologists.

### Whirling Disease Life Cycle

- Spores found in soil in bottom of waterbody
- 2 weeks of myxospores by Tubifex worms where they develop into Trichostonyx (TAMs)
- When an infected fish dies or is eaten by a predator, it releases the myxospores into the mud bottom where the Tubifex are and the cycle begins again.
- The Tubifex worm releases the TAMs into the water.
- Fish become infected by the TAMs as they graze on the silt.
- Infected fish may begin exhibiting whirling behaviour. Most fish will spiral deform.
- Can be tested for whirling disease by submitting the fish sample for analysis.

Alberta Environment and Sustainable Development

### Planted Willows Providing Habitat

It has been 9 years since native willows were planted along the stream channel on Millennium Creek. Some of the plants, in some areas along the creek, have grown tall and rather fast, but other plants are growing slowly. The plantings were done mostly along the edge of the water to help stabilize the soil so that they would provide good habitat for trout.

During the open water season, when the leaves add shade to the stream, good overhead cover benefits the resident trout population. Since the riparian root systems have stabilized the stream banks and there are plenty of good undercut places along the edge of the creek to add hiding places for small brook trout. It has taken a long time to see some of the full benefits of this type of riparian habitat enhancement work, but it is well worth it.

This past fall, I witnessed a number of brook trout spawning on areas of the creek partially under a canopy of willow plants. The grave they were spawning in was hauled into the site during the stream restoration program in 2008 and to see the trout utilizing it was a rewarding experience. A team of 5 volunteers had complete the planting program in 2007.

### HOME

**Below:** The willow plants coming out of the stream bank right above water's edge were planted in 2007. They may be growing slowly, but the plants are well established with large root systems to stabilize the stream banks on Millennium Creek.





- A young fly fisher catches his first trout on a fly. See the article below by Tim Carlson.
- The West Nose Creek Fisheries and Habitat Program Moves Forward.

## West Nose Creek Brown Trout Fishery - Recovery Program

This last year was a memorable one for the recovery of the brown trout populations on West Nose Creek. Although there hasn't been significant baseline data collected on the fall spawning activity on the creek, this fall there were over 2000 brown trout eggs mapped and documented. This was up substantially from the 2015 fall spawning survey, which identified a total of 17 brown trout nests.

Another big discovery was made in the 2016 angling survey. The first juvenile brown trout was captured on the creek. The small brown trout was 80 mm in length and it was captured and released successfully, while fly fishing the stream in August of 2016. This was a fantastic discovery and with continued spawning activity on the stream, I am confident that the population of brown trout will increase over the years.

As part of the "Bow Valley Riparian Recovery and Enhancement Program" a total of 10,100 native willow and tree plants were planted along the stream banks of West Nose Creek at various sites within the City of Calgary. This ongoing riparian restoration program will create excellent fish habitat over time. The native plants are planted along the water's edge on the stream.

In recent years, the volume of flow in West Nose Creek has increased considerably and within the City of Calgary, new springs are being diverted into the stream channel. These new spring water diversions are located where storm drain outflows enter the creek. Also, when major construction of overpasses and freeways are built along the creek, any spawning habitat that is encountered is diverted from the construction area into the West Nose Creek.

This past fall, up until the ice covered the creek, the water quality was the best that I have witnessed in the few years that I have been working on the stream. This clear, clean water will insure a better change of successful brown trout egg incubation over the winter months on West Nose Creek. The result could be a substantial egg hatch in the spring of 2017. We will have to wait and see if my prediction is true, later on in the summer of 2017.

During this year's riparian plantings, Bow Valley Habitat Development and volunteers will be planting further up the creek, near the City of Calgary boundaries, so I am looking forward to another great year of planting on West Nose Creek. I have inspected the proposed planting area and there are plenty of deep pools and runs that could benefit greatly by the addition of native willow and tree plants. As we improve the fish habitat on the creek, the trout will slowly start moving further up the system.

This is one of the most exciting programs that I have worked on. The potential for a spring creek trout fishery right in the heart of the City of Calgary is tremendous. Presently, there are approximately 20 kilometers of stream channel within the city limits and this will increase over time. Just think of it, 20 km of stream that you will not have to get permission to fish. That much trout water could handle over 100 fly fisher's a day and there would still be room for more.

I have fished well known brown trout streams such as the Raven, Dogpound, Fallen Timber and Little Red and I know that West Nose Creek has the potential to rate right up there with them all for a quality brown trout fishery. It is just a matter of time and some work.

## West Nose Creek Angling Survey Provides Baseline Data

Before any type of fish habitat enhancement program or fisheries management plan is implemented, baseline data of the existing fish population needs to be collected. Outside of an extensive and costly electro-fishing survey, the other option often used is to conduct an angling survey using experienced anglers, preferably fly fishers.

The preference for fly fishers is based on the use of single barbless fly hooks that do not harm the trout much as bait hooks or treble hooks. It is also an enjoyable way of helping out fisheries managers by providing some good data on what populations of trout are present in a stream.

Organizing an angling survey is easy, because most fly fishers are keen on helping out. One of the guidelines that I use, is to pack a camera and photograph some of the trout that are caught, just to confirm species and give people involved an idea of the condition of the trout. Photos can tell a biologist how healthy the fish are in appearance and help determine whether there is adequate food in the stream to maintain a trout population.

The standard requirement for an angling survey is to record the number of trout captured in a given time period and where the fish were caught and released. This is referred to as "Catch per Unit Effort". The records will give a fisheries biologist an idea of the estimated trout population in a stream.

On West Nose Creek, my first and second angling survey showed that on some areas of the stream the catch per unit effort was 1.2 trout per hour and on some other trout holding areas it was .5 trout per hour. The rest of the stream came up with a zero catch per unit effort. The first survey was conducted in 2015 with another round of angling in 2016.

Now that some baseline recording angling has been completed on the creek, it can be used to monitor the trout population recovery on the creek. Another fisheries management tool that is being used is an annual spawning survey, to determine how many mature brown trout are present in the creek. This will be an ongoing survey for West Nose Creek.

Both the angling survey, work and the spawning surveys can also confirm how far up the system that trout are present. The angling survey gives a clearer picture of where trout reside in the stream, while the spawning survey shows how far up the creek trout will migrate in their spawning cycle.

The spawning, if successful, moves trout populations further up the creek, because any eggs that hatch will create a juvenile population in that area of the stream. Juvenile trout are known to be ambitious explorers and they will move long distances further up the creek. When this happens, trout will be caught in areas further up the West Nose, during future angling surveys. I really look forward to making this discovery.



Above: Large brown trout reside in West Nose Creek, Calgary.



Above: This brown trout hatched on West Nose Creek in 2016.



Above: This large brown trout stands guard over a red in the 2016 fall spawning period on West Nose Creek, Calgary.



Above: Tim Carlson and his family make their home in the town of Cochrane, Alberta. Tim is a big fan of small trout stream fly fishing.



Above: This is a photo taken by Tim Carlson, of his son Solomon, with the boy's first fly rod caught trout. You can see by the smile on his face, he's very happy.



Above: This is a log V-weir pool habitat that Bow Valley Habitat Development designed and constructed. The photo was taken four years after construction was completed. The structure is starting to blend in.

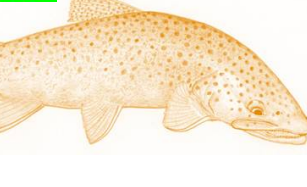


Above: This log V-weir pool habitat has a nice undercut bank at the far end. The pool is approximately one metre in depth with plenty of perimeter cover habitat. Willows were planted on one side of the v-weir.



Above: A boulder habitat was constructed on this length of stream channel. The photo was taken four years after the project was completed. Spawning by brook trout now occurs in this reach of the stream.

HOME



"Patient Progress" - An article by - Tim Carlson  
 « Our tradition is that of the first man who sneaked out to the creek when the tribe did not really need fish. » - Roderick Hog-Brown

All great memories, like great stories start with a fly fishing sound, or a feeling. Mine began on a crisp early morning up the Forestry Trunk Road northwest of Cochrane. My son and I had a good night's overnight in my father's 1971 Boler. The furnace wasn't working so it got pretty chilly that night but we kept warm in our sleeping bags, dreaming of what the next day might bring. We went out to a beautiful September morning with the sun peeking over the hills, warming the cool frost on the ground, while the river ran strong at the bottom of the canyon. We cooked sausage and hash browns on the grill and I brewed a strong pot of coffee, the kind that tastes so much better on days like these. With the whole day before us we descended to the river and geared up with adventures before us and curious fish below our feet. My son is only 9 years old and loves fly fishing. He's wanted to try fly fishing for several years but I was told by several people that a kid that young can't fly fish, that it's too difficult and frustrating. What I figured out is that it isn't that it's that difficult and frustrating for the boy, but it's more for the dad.

Teaching over and over, correcting or pulling flies off nearby trees...it's a long and arduous journey teaching a boy to fly-fish. Probably should have coffee on a cool morning. So what Norman's dad taught him in A River Runs Through It - ten and two in the field brought it all Sol didn't complain much, partly because he knew that fishing with his father was something he should respect and honour. It was different than a day of snowboarding at Nakiska, or hiking in K-Country, you had taken your eyes off the water. Fly-fishing was something that his father loved to do and he wanted to share that. And so he practiced patience as he practiced his back cast. And so he and I grew together - he worked on catching water while I worked on sharing my passion. He learned about aquatic insects while I learned how to teach even though I have spent my life as an educator. He learned how to set a hook while I learned how to set a

path for my son to enjoy the simple things of life like the sight of an eagle soaring overhead, the sound of water that never stops rushing, the smell of pine trees and the taste of strong coffee on a cool morning. And so we descended to that river that I had descended to many times before alone. We fishes! The morning walking down the river over large boulders, around tight corners. I found several cutthroat and a few bullheads but Sol wasn't able to anticipate a fish to surface, one who would commit to the fly passing by. It was later in the day when we got back to the water we had started on and I tied a Stimulator on the end of my three-weight Sage, and showed him to a corner where I thought we might find a few fish backing in the afternoon sun. I stepped back and watched as he worked the fly out and dropped the fly at the top of the riffles and patiently watched the water. A soft slurp that would have been unnoticeable to me, but I thought we might find a few fish backing in the afternoon sun. Up he lifted the tip and the water exploded and the rod bobbed up and down as Solomon fought the monster. Keep the tension on...keep the tip up...strip the line in as the fish gives it to you...let him run if he wants to...strip in again to get him close to the shore and I'll net him...good job, my boy...let's get a picture of your first fish on the fly...I'm proud of you buddy. The monster turned out to be a bull trout.