



The Orange Spot Brook Trout

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# Stream Tender Magazine

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**VERY SPECIAL CHRISTMAS ISSUE**

**December 2019**

Magazine Mission Statement

Publisher/Editor Information

Pages

## Stream Bank Stabilization

Below: This stream bank is one of many stabilization sites that have been planted, as part of the BVRB Program



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Below: This photo shows the same stream bank, five years later. The native willow plants are doing great and the stream bank is on its way to full stabilization. These sites have contributed towards the cleaning up of the water and streambed, downstream.

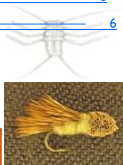


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## Willows Providing Habitat



Some of the first willows that we planted in the start of the "Bow Valley Riparian Recovery and Enhancement Program", are now providing trout habitat along the water's edge of local streams. As soon as the willows start growing over the surface of the water, they are considered as overhead cover. Overhead cover is one of the primary classifications of fish habitat on streams and lakes.



Articles and photos by Guy Woods and mentioned contributors



The brown trout has been considered a robust survivor of the trout family. It can tolerate warmer water temperatures, poor water quality conditions and it is generally hard to catch. Lately, the brown trout's resistance to whirling disease has insured its survival into the future.

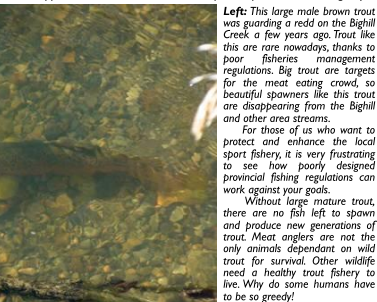


Left: This September, we were hit by an early snow and cold spell here in Cochrane, Alberta. I walked down to one of our riparian planting sites, to see how our willows were doing. The mix of willows were still green and growing well, along the stream banks of Bighill Creek. I decided to take this photo of the plants against the dark color of water in the stream channel.

## Large, Mature Trout Are Vanishing From Our Small Creeks

There are a few local streams where wild brown trout are still hanging on, despite poor water quality and no management strategy to protect them. For years now, Bow Valley Habitat Development has been monitoring the spawning numbers of trout on some of these streams, to keep track of their numbers and determine whether the fishery is on the incline or decline. Presently, there is no close fishing season to protect these trout.

This is a crying shame for those fishers that want to see more healthy trout streams that they can enjoy. The modern anglers know that local Provincial fisheries biologist killing wild trout in a small stream is doing something to resolve the ridiculous and allowing a harvest works counter to the norms of a good fisheries management strategy struggling wild trout populations in to protect and enhance these wild trout populations. Over the last few years, I have been very disappointed in witnessing the disappearance of mature trout



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Left: This large male brown trout was guarding a reid on the Bighill Creek a few years ago. Trout like this are rare nowadays, thanks to fisheries management regulations. Big trout are targets for the meat eating crowd, so beautiful spawners like this trout are disappearing from the Bighill and other area streams. For those of us who want to protect and enhance the local sport fishery, it is very frustrating to see how poorly designed provincial fishing regulations can work against your goals. Without large mature trout, there are no fish left to spawn and produce new generations of trout. Meat anglers are not the only animals dependent on wild trout for survival. Other wildlife need a healthy trout fishery to live. Why do some humans have to be so greedy!



Above: Pileated woodpecker is a very large bird and the second largest of the woodpecker family. The ivory billed woodpecker is the largest, but it is possibly extinct on this continent. I will see the Pileated woodpecker on rare occasions, when I am walking the stream banks of the Bighill Creek. Its ratter loud call is very distinct and the sound of it pecking a tree carries a long distance. The bird prefers the abundant stands of poplar along the Bow River and Bighill Creek. This is why it is important to protect and enhance stands of poplar trees in our area.

## Poplar Trees Are An Important Part Of The Habitat That Woodpeckers Use For Feeding And Nesting!

## Fall Spawning On The Bighill Creek Watershed



Above: This is a photo of a spawning pair of brook trout, on Ranch House Spring Creek, before the stream channel was decimated by the effects of a new storm drain.

It is really hard to witness the rapid death of a once productive spring creek trout population. Brook trout once lived in the stream in the banks and streambed. The scouring early stages of life and the mature aquatic adults also spawned in the stream. The spring creek was first thought to be a nursery stream for juvenile trout from the Bighill Creek. Until it was discovered that brook trout also spawned in the stream. The Bow Valley Habitat Development project on the creek to step down the steep gradient, so that trout could migrate upstream to the spawning habitats. The trout did, and the result was a substantial increase in the spawning activity in Ranch House. Unfortunately, the creek was doomed when a new storm drain culvert was installed on Ranch House Spring Creek. Immediately the creek began to show the symptoms of a creek that was about to transform.

The creek did transform into a drainage for large volumes of water that continually blew-out the stream banks and streambed. The scouring invertebrate populations downstream were bent over onto their sides, the floods washed over their tops. I knew immediately that the creek was quickly being destroyed and thus trout populations along with it. This type of impact was not necessary. Another discharge area was really close by, so if the alternate site had been chosen, the impacts on Ranch House Spring Creek would not have occurred. The importance of the creek was never identified when the consulting work was completed, so the trout and the creek never had a chance.

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Classic Atlantic Salmon Fly  
Pattern tied by Guy Woods



A water strider eats a small mayfly on still waters

It is in my own opinion that all flowing rivers and streams should be respected, above being just a meat market for those that take from the environment. Allowing a harvest of wild trout, any size, quickly leads to the imbalance of the entire aquatic ecosystem.

This happens because a keystone species, like the wild trout, is removed from the stream. With a catch limit allowed on a stream, it is impossible for fisheries managers to protect the stream fisheries. The best approach is to have a catch and release only regulation, on all flowing streams.

## HAPPY HOLIDAYS EVERYONE!



We have to start thinking differently about our stream environments, and ways that we can help protect and conserve them. The fish and wildlife that use riparian habitats should be a priority, in the long term ecological management and enhancement plan or strategy.



## Millennium Creek Spawning Trout

The first day that I noticed brook trout spawning in the spawning channel's upper reach, a number of photos were taken. They were not the best photos of spawning trout that I have captured on the spawning channel, but they were good enough to share with you.

On that day in October, there were three pairs of mature brook trout on the upper area of the spawning channel. They were busy courting and fanning the redd or egg nest. This was special, because it was the tenth year of spawning in the channel, so getting a few photos was a good way of memorializing the event.

The man-made spawning channel and its gravel has accommodated many a spawning pair of mature brook trout, over the years. The old, weathered logs are getting more cracks and moss, a sign of the bygone years. This is exactly what we hoped for, when the logs were first installed in place, in 2010.

There has been some annual maintenance on the spawning channel site, over recent years, but the structure is still holding in place. The channel is also producing lots of new generation brook trout for the Bighill Creek. I will be monitoring the egg hatch again this next year. Emergence from the gravel starts in January.

## West Nose Creek Willows



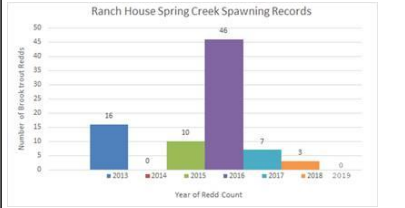
Since 2014, we have been planting lots of native willow varieties along the stream banks of West Nose Creek, upstream and in the City of Calgary. Despite regular grazing by resident beavers that live in the creek, the

willows are taking hold and growing thick in some areas. Over time, the plants will be tall enough to visually stand out, above the tall shoreline grass and sedge. We will continue to plant along this and other area streams.

## No More Spawning in Ranch House Spring Creek

Since I first started conducting spawning redd counts on Ranch House Spring Creek, I saw trouble on the horizon. A newly installed storm being discharged into Ranch House drain, just upstream of the key Spring Creek's watershed. This spawning habitats on the small creek, happened during spawning and it was going to create major changes in totally wiped out the 2014 spawning the stream's historic importance as a season.

The year 2016 saw the last great spawning season for the creek. By the second year of my redd counts, a nearby lake was being pumped down and the water was the horizon. Large erosion problems were first changes started happening. The was discharges from the storm drain were only a few brook trout spawning in blowing out all of the invertebrate life 2018 and this fall there was nothing, on the streambed and erosion of the stream banks was destroying the creek. Only a few years earlier, you would always see juvenile trout in the creek, but now there is nothing.



Above: This chart shows how the Ranch House Spring Creek spawning has collapsed in the last few years. There were no spawning brook trout this year in the creek. The creek is a very important spawning tributary to the Bighill Creek and now it has been totally destroyed. Something has to be done!



## Fly Tying - Pre-Winter Season Begins

The first snowfall we had in October had me thinking of some fly patterns that I must tie this winter. It also prompted a few hours of creativity at the fly tying vice, a little earlier this year. It was one of those times when you have a particular fly pattern in mind and before you forget about it, you need to create the fly pattern. One leads on to tying more, but that is just the way it goes with my hobby.

Nymphs are probably the most common fly pattern that everyone likes to tie. The bead head patterns seem to dominate the fly box. The weight of a bead, especially a tungsten bead, helps get your fly down to where the trout are holding, just off the bottom. However, I still tie nymphs without a bead, if I need one to float just below the surface. Brass beads are also a good imitation of a damselfly nymph, so you can't go wrong with this thin bodied pattern.



The fly in the photo above is a slender mayfly pattern on a size 14-2X nymph hook. The bead is tungsten and this pattern will work good on streams and lakes, with the lakes being the best bet, fished on a retrieve with a stripping motion.

The wing case is a bleached goose quill. The bleaching gives the quill a reddish, tan color and makes the fly blend in with both the body and the legs of this wing. Stripping the fly makes the legs flex and move.



Above: This beautiful hen, brown trout, was caught and released on the Bow River this summer. What a slab! The fish was caught and photographed by Evan Martens of Cochrane. Nice job Evan!

## Bleaching and Burning Feathers – for Fly Tying

You may have read about modifying feathers for use in fly tying. Bleaching and burning are common descriptions of lightening materials or burning some of the webbing on a soft hackle or other feather type. This is something that I do in my own fly tying preparations.

The burning is done by dipping a wet bunch of feathers into a dilution of house hold laundry bleach, to remove the fine fibres that holds a feather's web together. I have experimented with exposing the feathers to a bleach and water mix for a given number of seconds, to remove the fine webbing and without damaging the feather.

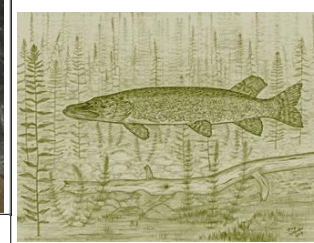
I use Hydrogen Peroxide to lighten the color of feathers and fur. The peroxide is much gentler to use than the bleach, so you can dip dampened feather into the peroxide for hours or days, to get the desired effect. The peroxide needs to be protected from light to be effective. It works to achieve a lighter shade of color.

I first started using both bleach and peroxide years ago. The bleach burning of feathers was necessary to tie specific Atlantic Salmon patterns and steelhead patters as well. It worked great on schlappen feathers and other long fibre hackle feathers. A few seconds of exposure to bleach and the right amount of water, would totally transform the feather for a great hackle and throat tying material.

The hydrogen peroxide is most often used to change the color and lighten furs and feathers. I like changing squirrel fur to a lighter shade for tying many different nymph fly patterns. You can also prep feathers and furs for dyeing to another color, after they have been lightened by long peroxide exposure.

All of this may seem like a lot of work for a certain effect, but it adds another element to your fly tying practices. It also makes some of my fly patterns that much more unique than those that are sold in fly shops. The costs are minimal.

The northern pike is a very popular sport fish in the province of Alberta. Numbers of pike survive in east slope creeks and prairie streams in Alberta, some populations of creek pike, make great recreational opportunities for many anglers, young and old. They are also fished for in lakes.



In the photo below, a brook trout holds close to shore, under the cover of an overhanging willow. The grass is the anchor in this photo. Everything else is surreal.



Using black thread on some nymph patterns is quite common, especially for beginner fly tiers. I personally think it accentuates some patterns that I tie. A thin thread also is a must. Size 8/0 or smaller is nice to use on fold forward wing patterns, like the one shown above. Having a little black in a pattern can sometimes attract the trout.

## Keeping An Eye On The Little Guys



There are a lot of photos and writing about larger trout, but the little guys are also always worth watching, you can believe this for a number of reasons. The future of a fishery depends on a good hatch of new generations of trout to populate our local trout streams. If you spot a number of smaller trout darting for cover, as you walk the stream banks of a small creek, you will know that the creek's trout population is intact and reproducing.

If the population of small trout disappears all of a sudden, you know there is something wrong. It could be a lack of mature trout to reproduce or there may be other bad influences that make habitation for trout impossible. The biggest hurdle in this method of monitoring trout populations is that you need clean, clear water to see the fish. With small spring fed feeders, the water is usually always pretty clear, but sometimes a rain event will change things in a hurry.

I have found that the trout start to migrate from their spawning beds when the current washes them downstream or after approximately three weeks of free swimming. It is then that they will start to travel. By the fall, young of the year trout are fast swimmers and they will migrate for some distance to wintering pools, or downstream into the main stem of the larger waters, like rivers or larger streams.



## Large Trout Are Disappearing From Bighill Creek

The best way to determine the number of mature brown or brook trout that occupy a small stream, where the resident trout spawn every fall, is to count the number of trout redds during the spawning season. It is simple to do and very effective when it comes to gauging reproduction and the state of a fishery.

This last year and this fall, I have noticed a sharp decline in the number of mature trout redds in the Bighill Creek's lower reach, which is alarming to see. This fall there are only a few brown trout or brook trout redds on areas where there were plenty in the past.

Since the regulation change for Bighill Creek happened in 2017, an angler is now entitled to kill two trout of any size on a days fishing. When I say entitled, this is what a trout killer's argument will be, in defence of his greed. This is where the problem first started.

Before the 2017 change, an angler could only keep one trout under 35 cm, which would protect the mature trout of spawning size. This insured an ongoing recruitment of new trout for the system. Which in my mind makes perfect sense. Don't kill the trout that are reproducing! If you do, the fishery will collapse.

The complacency by F&W is what makes the whole situation on BH Creek very aggravating. I have learned that you are wasting your time when you try and argue the whole point about harvesting mature trout, with the area's provincial fisheries biologist. They just don't seem to get it. Maybe when the entire brown trout fishery collapses on Bighill Creek, they will come a running. Our provincial agencies have always been better at reactive management tasks.

In the fall of 2019, there were only a few brown trout redds on the lower reach of Bighill Creek. This is very alarming to see!

When I say plenty, it means in the high 20s for past redd counts. This area of the Bighill Creek is one of walleys fisheries were in a state of the key spawning habitats for the collapse in the early 90s. Also, when Bighill Creek, and very important whirling disease was suddenly for the brown trout populations, detected in Banff National Park. The larger trout are being harvested by anglers that have no interest in conservation or the health of the trout stream that they are fishing in.

A good example of this was when the entire provincial pile and area of the Bighill Creek is one of walleys fisheries were in a state of the key spawning habitats for the collapse in the early 90s. Also, when Bighill Creek, and very important whirling disease was suddenly for the brown trout populations, detected in Banff National Park. The larger trout are being harvested by anglers that have no interest in conservation or the health of the trout stream that they are fishing in.



**Below—left:** This female Evening Grosbeak was on Bighill Creek, in a flock, while traveling south for the winter. The two photographs were taken in October.

**Below—right:** This male Evening Grosbeak was one of many in the flock. My guess was that it was from the spring hatch this year.

## Song Birds Need Deciduous Trees

The natural riparian willows and trees that grow along our area streams are deciduous plants, they all lose their leaves in the fall. However, this does not negate their importance to the wildlife that depend on such willows and trees for nesting and feeding.

There has been an active campaign by other volunteer groups, to plant conifers in existing stands of deciduous growth along Bighill Creek. Primarily because spruce and other conifers are cheap to buy and very hearty trees to plant, with volunteers. The problem arises when these newly planted conifer trees start to grow and crowd out the existing deciduous growth. This upsets the existing natural balance and biodiversity of a riparian zone.

Why plant trees and willows where they already exist in sufficient numbers. This practice does more harm than good. Eventually, the deciduous poplar trees and smaller shrubs and willows will be crowded out and this will dramatically change the eco-system from a natural one to one that was man-made.

Like other people that visit the natural habitats along flowing trout streams, we enjoy the vistas of plants and wildlife that are present along these creeks. You can see for some distance deep into the poplar stands, where wild birds and fur bearing animals thrive. The conifers will eventually grow thick and dense and limit the view to only a few metres. We will also lose the natural varieties of wildlife that we normally see in stands of poplars and willow plants.

## Stream Bank Stabilization - A Few Years After...



**Before:** This photo shows an eroding stream bank along the Bighill Creek. The exposed clay soil is a tough medium for any plant growth, but weeds do grow on such slopes. Over the next few years, the site received multiple plantings of willows right along the toe area on the slope.



**After:** Five years later, the slope has a good crop of native willows growing along the water's edge. There are also some grasses mixed in, now that the stream bank is stabilized. Some of the willows are even providing habitat for the resident trout populations. Both brown trout and brook trout are the dominant species of trout, but some rainbows and cutthroat trout make the creek their home.

**Right:** This slender length of gold was caught and photographed by Evan Martens this summer. I wonder why this trout was called the brown trout, when it always seems to be more on the yellow/gold side of the color span.

Some browns develop bold, bright colors when they are living in small streams, where blending into the dark is a real advantage. It also makes them stand out as a territorial predator.

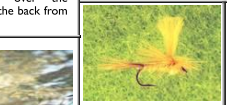
Fortunately, this large trout was released back into the water, where it can continue with its life of seclusion, hiding under an undercut, willow branches, or in a deep pool.



## West Nose Creek Brown Trout Spawning - 2019

This fall I was showing City of Calgary city contacts and also sent a copy to Elliot Lindsay of TU's national office, in Calgary. Elliot also plans on doing a redd count later on in November, so I look forward to his findings. Bottom-line, it looks like a great spawning season on West Nose Creek this downstream to another one of West Nose Creek's hot spawning habitats.

Fortunately, there were two large brown trout holding over a single trout redd at the second site. The large browns stayed over the redd as we both observed them from a distance. I was really pleased that Andrew had an opportunity to witness a pair of large West Nose Creek trout, spawning on the creek. It beats seeing only redds, with no trout over them.



**Left:** I zoomed in to get this shot of a large male brook trout and the head of a female, bottom left. The light created some incredible dark red and olive green effects on these trout. These trout wouldn't go out into the sunlit areas on the small stream.



**Above:** The photo shows Ranch House Spring Creek spawning brook trout, on one of the stream's better, earlier years. The crystal clear spring fed waters and clean gravel make a perfect spawning habitat for these trout. Now the creek has been totally destroyed by a storm drain.



The midge pupa may be small, but it is so abundant that it is one of the primary food sources on some lakes and rivers. I have fished with small size 22 midge pupa imitations and done very well on large trout. When trout feed on these small aquatic invertebrates, they can swim fast and furious, sucking up the little bugs.

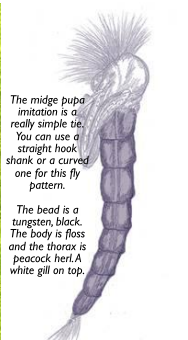
During thick hatches of midge adults on the Bow River, the tiny insects can get in your eyes, nose, ears and mouth, the air can be filled with them. They fly like miniature mosquitoes. They don't bite, but their sheer density is annoying for humans but great for feeding trout.

You don't have to play around with the super small fly hooks to catch trout on midge fly patterns, a size 16 or larger will work too. The midge pupa is larger than the adult, so have good selection in the box.



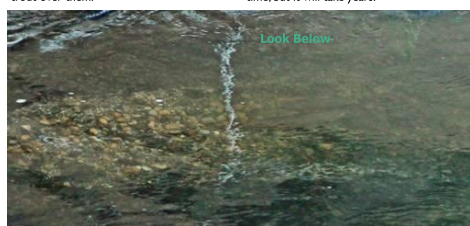
The midge pupa imitation is a really simple tie. You can use a straight hook, shank or a curved one for this fly pattern.

The bead is a tungsten, black. The body is floss and the thorax is peacock herl. A white gill on top.



I passed on my map of the redds to my city contacts and also sent a copy to Elliot Lindsay of TU's national office, in Calgary. Elliot also plans on doing a redd count later on in November, so I look forward to his findings. Bottom-line, it looks like a great spawning season on West Nose Creek this downstream to another one of West Nose Creek's hot spawning habitats.

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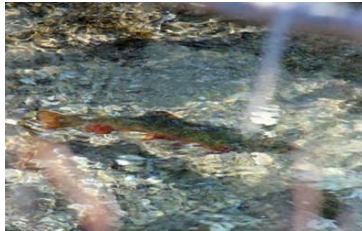
**Look Below:** The photo shows Ranch House Spring Creek spawning brook trout, on one of the stream's better, earlier years. The crystal clear spring fed waters and clean gravel make a perfect spawning habitat for these trout. Now the creek has been totally destroyed by a storm drain.

Bow Valley Habitat Development is really pleased with the City of Calgary's interest in taking care of its flowing streams, within the city limits. The attention that both Nose Creek and West Nose Creek are getting these days, will benefit fish habitat, water quality and protection for the trout that use these streams as home waters.

Newly developed areas along both streams are taking place, with a wide buffer on both sides of the creeks, which will allow plenty of healthy riparian growth to occur over time. The fact that both branches of Nose Creek are now recognized as trout streams, will help immensely as the impacts of development are reduced by good planning and watchful eyes. As the trout fishery improves, the amount of interest the stream's receive will grow. Like I have mentioned in previous articles, trout stream's need friends!



Big Trout Stand Out — Over A Fresh Redd



This large brook trout was holding over a freshly dug redd (egg nest) in the gravel bottom of a crystal clear creek. The picture was taken thru some dense stream bank cover so a few twigs got in the way. These spawning trout can reproduce without the harassment from humans or livestock. It truly is a wonder of nature to see such color on wild trout during their spawn.

I only pack my cameras during the spawning season on this particular stream and on any other. Most responsible anglers that I know leave the trout alone during spawning season. They recognize the importance of our conservation of our wild trout.

## Crystal Clear Waters And Brook Trout Spawning Over Clean Gravel



It was one of those overcast skies that help make the clear water of the stream easier to see into. Just upstream of my approach, another pair of good size brook trout are in spawning mode. When I first spot the two trout, I knew it was time to go into a slow stealthy move into position, for a photo or two.

These type of experiences are memorable for me and I love when they happen. After all, beautiful healthy trout spawning in a pristine spring creek, is a wonderful thing to witness. It would be a shame to lose this, and deprive future generations of similar experiences. This is why it is so important to protect our home waters, and other local trout streams now.

There are many impacts that are slowly killing our trout streams in this province, it is time to act. Water quality and habitat are key factors in the survival of wild trout, so this should be addressed. Secondly, we must protect all wild trout, so that they can fulfill their important role in the natural eco-system of a trout stream.

It is wonderful when local grass roots organizations help along the way, but the protection of the wild trout needs provincial involvement. The best way to protect these trout is enforcing a total zero harvest on all streams and rivers in the province of Alberta. This is the only way to protect what is left of our wild trout populations. Total catch and release!

## The Crisscross Nymph



This little beauty is called the Crisscross nymph, due to the two ribbing wraps that are wrapped in opposite directions on the abdomen. This wrapping helps streamline the narrow abdomen and it adds some intriguing colors to the choice of dubbing that is used. The rib is copper wire/Mylar.

The dubbing on the abdomen is a mixed grey/tan/brown blend of wool and poly. The thorax is a mix blend of squirrel with a dry fly line, for lake fishing. I like to strip it in either short or long pulls.

The tail feather is a lemon yellow, teal flank feather bundle, pinched from the quill. The legs are Indian hen fibres and the wing case is bleached Canada Goose quill, but a section of pheasant tail will do.

All of this is put together on a 2X, size 12 or 14 nymph hook. A tungsten or brass bead is used, either gold or copper works fine. You can fish this pattern on a long leader with a dry fly line, for lake fishing. I like to strip it in either short or long pulls.

## Bighill Creek In A State of Eutrophication This September



When levels of nitrates and phosphorous are excessive in a flowing stream, the result will be higher than normal weed growth and algae blooms that turn the stream green. This is described as "being in a state of eutrophication" and it is not a healthy state for any flowing spring creek to be in. This was the case for Bighill Creek this late summer and into the autumn and early fall this year.

It all happened on the lower reach of the Bighill Creek, where numerous storm drains dump street and lawn runoff into the creek every year. It also demonstrates how much we over fertilize our lawns and flower beds in the central core of the Town of Cochrane, in both commercial and residential areas.

There are no storm drain ponds for this area of the town, so ground runoff goes into the creek without primary treatment. This is all really bad for the resident trout population in the creek and all of the other life that depends on clean water to survive. The need to be more vigilant about what goes into the creek is not a new concept, so this should not be an issue in modern times, but it is.

It is time to start experimenting with using less fertilizers and letting the mulch from cut grass maintain the soil nutrient. Recently, there was some press information on leaving dead leaves on the lawn to help enhance the soil, but people have a hard time changing old ways. Think about this before you spread or pour!

## Illegally Built Bridge — Washed Out On Bighill Creek



Volunteer groups are very gung-ho about getting right to work and doing some good around the community. However, their good intentions can sometimes cloud better judgement. I recently came by a washed out bridge on the Bighill Creek.

A local volunteer group built a few of these, with the intent of creating better access along the stream. There are a few problems with this however:

- The bridges were built illegally, without the necessary permits or permissions.
- The design of the bridge was amateur and the bridge's were poorly built.

The result is that now we have a pile of wood that needs to be cleaned up by someone. Any construction along a flow stream needs a review and lengthy approval process, which includes permits from both federal and provincial authorities.

Bow Valley Habitat Development has had to do this many times over the years, but it is the law and I can understand the rational behind this process.

I always question the validity of any protectionist group that has a main objective of opening up the access on a trout stream, by building bridges and creating more path systems. Why not leave a natural space, natural!

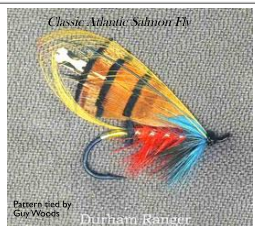


Left: A spawning brook trout holds close to the stream bank, hoping to stay partially concealed, in the crystal clear waters of a spring creek. This is why shoreline cover, such as willows is vital for cave habitat during spawning rituals.



Right: This photo shows the excessive weed and algae growth in Bighill Creek in September. The first snow arrived early this year, but it makes the green stream channel stand out in the photo. There is too much nutrient entering the lower end of Bighill Creek, causing pollution which promotes weed and algae growth in the creek.

The warming of the earth's atmosphere is a global threat, but if we can't manage to take care of what little nature is surrounding us on a local level, we are truly doomed. If you are prepared to do something to stop global warming or climate change, try looking into what you can accomplish on a local level. Protecting and enhancement of natural areas in the neighbourhood is a good place to begin. If you are fortunate enough to have a river or small stream in your area, these make great places that you can start to protect.



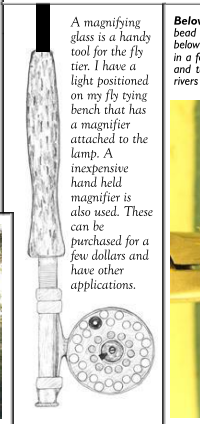
Classic Adhatic Salmon Fly  
Pattern tied by Guy Wood  
Durrant Rafter

**Right Photo:**  
Close-up photography is a great tool for the fly tier. You can take a picture of your fly patterns and see what you can do to make your fly patterns even more neatly tied. A magnifier also does the same job, but it can get in the way at my fly tying station.

On the pattern shown to the right, I can see that my rib wrapping needs a bit of attention. The pattern will still catch trout, but I prefer to tie something that will also catch the eye of the customer. A well tied fly shows that each pattern is getting the attention it deserves. Crisquing your own fly patterns will make you a better fly tier.



Take a closer look with a photo to improve your fly tying.



A magnifying glass is a handy tool for the fly tier. I have a light positioned on my fly tying bench that has a magnifier attached to the lamp. An inexpensive hand held magnifier is also used. These can be purchased for a few dollars and have other applications.



Below: This nymph pattern was tied without the extended wing case covering the head head. Most of my nymph patterns have an extended wing case, the fly shown below is what I would call a "Clean Head". The fly is a neat version to have on hand in a few different patterns. On this batch of nymphs I was using copper/brass beads and tungsten gold color. The tungsten is great for getting down fast in fast flowing rivers and streams. The brass is perfect for Salmon fly fishing on a dry line.



**Above and below:** This brook trout was swimming backwards in the current, maybe to get a better look at what was going on. After spotting me, the trout continued to swim backwards down into their better cover habitat. The spawning colors make the beautiful trout stand out in the clear water. The trout has its eye on me in both of the photos below!



## New Overhead Cover Created for Resident Trout



After five years of growth, many of the willows from our first year of planting in the "Bow Valley Riparian Recovery and Enhancement Program" or BVRRE Program, are now providing excellent overhead cover for the resident trout in Bighill Creek and West Nose Creek.

The dense growth in some areas along the water's edge is remarkable fish habitat. The nice thing about this is that it all appears quite natural, because it is. This is why bio-engineering trout habitat is the new trend in enhancement work that is pleasing to everyone, especially the trout.

The costs are still incredibly cheap, when compared to some overly engineered eye sore's. You just plant the willow along the wet perimeter of the stream and watch it grow over the years. The willows also provide great nesting habitat for song birds and waterfowl.

Anytime you can witness an increase in the amount of fish and wildlife, resulting from the creation of new riparian habitat, this is good. I am sure that the volunteers that helped plant these new native willows and trees will also agree.

This was the sixth year of our riparian planting program and next year is already in the works! I would like to break the 100,000 plant mark, before this program ends. All it will take is a few more years of both volunteer and partnership support to reach this goal.

I am hoping the seventh year of the program will be as successful as all of the previous years. So far, things look pretty good for another great year in 2020!

As previously mentioned, we have planted 71,914 native plants so far, so 100,000 plants is not that far off. The fact that we can now witness all of the new habitat that we have had a hand in creating is the big reward. It takes years to see these type of results, so when it finally does happen it feels pretty good.

Trout love to take cover under overhanging willow limbs or undercuts, beneath tree root mass, natural, because it is. This is natural because it is and the costs of creating it were minimal. Just planting native willows and trees can make a big difference, over time.

There will be many other benefits from these new native plants, but this will also be revealed over time. I am expecting an increase in the amount of spawning gravel in the riffle sections of the creeks that we are planting on. This is proven science, that willow and tree cover will help collect suitable spawning gravel which will create new spawning beds for the resident trout.

When the trout eggs hatch, there will be lots of new habitat for the juvenile trout, in lateral margin habitats, amongst the submerged willow limbs and small backwaters created by dense willow growth, along the water's edge. This will happen in the future.

Wild trout need two primary things to survive: clean, cold water and plenty of habitat. The habitat included some good wintering pools and suitable spawning areas. So far, we are looking good and things are getting better on a few local streams.



**Practice Makes Perfect:** After tying about three dozen flies of this pattern style, I was finally getting to the place I wanted to be, in my pattern consistency and quality of tie. This Crisscross nymph was a darker shade, with a matching dark wing case for balance in the coloration. The 8/0 tying thread was perfect for segmenting the wing to head transition. This pattern was tied with dark yellow tinsel flank for the tail, dark brown dub on the abdomen and a pheasant tail secondary feather that was really dark on one side. It was tied on a size 14-2x nymph hook, using a copper color of a 2.8mm brass bead.

## Tying Nymphs Without The Bead - For A Good Reason



Most of my nymph fishing these days involves the use of bead head patterns, to get the fly down to where the trout are. This is not the best way to fish a nymph in all presentations, however. Sometimes you need an un-weighted fly to keep your offering on the surface or slightly under water. Fishing the top zone can catch trout.

A good example is when the trout are focused on an emerging May fly hatch, so they are keyed into eating the helpless nymphs as they struggle in the surface tension. Or, the trout are cruising just below the surface, taking the active nymphs in the top few feet of a river or lake. This is when you need a fly pattern that will stay up near the top. An un-weighted pattern is the only option.

There are trout holding areas on the Bow River where trout hold in relatively fast flowing water. The bottom varies from 3 to 6 feet in depth, but it is littered with large rock that break up the flow. The trout like to take up position just behind a rock and eat any invertebrates that drift downstream of the long riffles reach upstream.

When I fish this particular spot that I have in mind, I like to use a nymph, if there is no hatch happening. The fly can be fished just below the surface on a drift, with or without a strike indicator. The light un-weighted nymph will just bounce off the top of the weed beds and large rocks. This is where you find the large trout.

## Before The Frigid Temperatures – One Last Look Before Ice

This fall, while conducting some spawning survey work, I had one last chance at a good view of some of the well known pool habitats that I have fished in the past. Yes, I actually caught trout in all of them. The trout were safely released back into the pools, with a little better education about what they should not bite onto.

The pool shown below is one of many. In this particular pool, I caught a real giant one time. The large brown trout was holding under the willow bush on the left side of the pool. I could see that the pool was deeper there, so that is where I drifted a nymph. Sure enough, there was a huge brown there and it

took my fly instantly. I could actually see the light color of the brown trout's mouth, open, when it took the nymph.

After years of flow, the pool had changed little. The willows were still there and the small backwater with a trickle of flow coming into it, was still on the right hand side of the pool. It is pools like this that some brown trout will winter over in. By the late fall, the trout are nice and fat and they can survive the winter months, below the ice.

Life for trout in small streams is no easy existence, so the last thing that wild trout need is too be knocked on the head by some angler. We need to protect our wild trout.



## Two Fast Growing Willow Plants:

These two willows were planted on West Nose Creek a few years ago. As you can see, they were planted close to the water's edge. If the beavers get to them, they will continue to grow, as long as some of the stem or trunk is left above ground. In any case, they will keep growing and thicken as a bush normally does, when it is pruned.

Willows can be cut down, but they will continue to grow. This is why beavers can happily feast all spring, summer and fall on a native willow crop. If there is an abundance of native willows, the plant can thrive, even with a beaver population in the creek. The beaver dams can flood and kill willows, but this is just the normal way of things along a healthy trout stream.

These are trying times for those that love to fly fish and also care about the streams that they have fished over many years. The impacts of human development and climate change are coming fast, in some cases too fast to protect trout streams.

We can become compliant about protecting our favourite waters or we can use our voice to become advocates for the precious trout creeks that insure habitat for trout survival.

Just in the last few years, we have lost a key spawning tributary to the Bighill Creek, due to poor storm drain planning and greedy developers that could care less about a wild trout population. I am talking about Ranch House Spring Creek, in the Town of Cochrane.

Once wild trout spawned in this small spring creek, but not any more. There is no invertebrate population in the small spring creek, because high volume discharge from the storm drain, has totally destroyed the natural aquatic ecosystem in the stream.

Every time there is a rain event or large snowmelt, the storm drain on Ranch House Spring Creek, re-creates a new streambed and stream bank erosion has become a real problem. This has made it impossible for wild trout to spawn in the creek anymore.

## The Bighill Creek – What We Don't Know Is ..... What We Should Know!

Development along the Bighill Creek Valley is rapid and ultimately will have an adverse effect on the creek's ecosystem and biodiversity. Primary impacts from storm drains that enter the creek. These storm drains source from street surface water run-off. Much of this run-off is charged with both nitrates and phosphates, among other nasty chemicals.

Presently, and historically, there has been a wild trout population in the stream, along with mountain whitefish and other important native species of fish and invertebrates. However, the survival of all aquatic life is under threat, especially on the lower reach of the stream.

A good case in point is Ranch House Spring Creek, a small spawning tributary to the BH Creek, on the lower reach. This important spring fed stream is now in a state of destruction. A storm drain inflow has started to erode the stream banks and channel of Ranch House Spring Creek.

It was discovered in 2013 that brook trout were spawning in Ranch House Spring Creek. In the fall of 2019, no trout spawning was documented on the creek. This dramatic loss is a result of the storm drain that has totally destroyed the stream in only a few years.

So there are some major issues that need to be dealt with in the near future, if we are going to save the Bighill Creek and its important tributaries. Without spawning habitat the fishery will quickly die off and the wildlife that depend on the fish, will also disappear.



In 2008, right after the Millennium Creek Project was completed, BVHD decided to complete a comprehensive Fisheries Study on the Bighill Creek. If you would like to view the study findings, please check out the link below: [http://streamtender.com/wordpress/?page\\_id=1442](http://streamtender.com/wordpress/?page_id=1442). This information is baseline for future comparative studies and it also will give the reader an idea of the importance of the entire ecosystem, along Bighill Creek. The study was funded by the Alberta Conservation Association, with support from the Town of Cochrane. There is also some valuable water sampling information in the report. Just check out the appendices.

Winter time is a good time to reflect on past seasons on the water, enjoying not only fly fishing, but nature at its best. All the while, trying to fool a trout into taking one of your favourite trout flies. For us older anglers, there may be memories of bygone days and thoughts about whether our wild trout fisheries will die along with the trout streams. It may seem cynical, but sadly it is a major concern.

With climate change getting worse by the year, it is time to snap out of it, and start making changes in your life that will help fight the battle. I know that I have!





Crisscross Variant

### Sage Two Cuttings

The rooted willow cutting to the right is a Sage Two plant. Meaning it is advanced in both top and root development. A hole is punched into the ground, right along the stream bank, and each plant is planted with a soil mix to help get it off to a good start. There are no chemicals or fertilizers used, during planting.

The best part of the day for planting is late evening or very early in the morning. This reduces the planting shock. Lots of stream water is applied to each planting. This is a very easy planting method that is fast and efficient.

In our area, an early May planting season is always planned ahead. As soon as the frost has left the ground, you can start planting native willows and trees that have been grown from small diameter cuttings.

This method of planting is a lot of fun and I really enjoy the work. A good volunteer crew makes all the difference.



### A Good Season Of Growth For Our Plants



Despite a few very high flow events on our three streams that we plant on, our survival of plants is pretty good this year. The fast growth is testament to a great growing season, with lots of rain. I was particularly pleased to see that the Glenbow Elementary school kids planting site was doing very well.

Many of this year's plants will soon be covered by stream channel ice, but knowing that the plants are going to survive the winter is reassuring. Once the ice locks the plants in, they are safe from any other threats or rodent damage. If deer browse the tops of the plants, they will be ok. The moist thawed ground of next springs melt will get this years crop off to a good start.

There were three different schools involved in this year's "Bow Valley Riparian Recovery and Enhancement Program". With some luck, we will have these students support again this next spring. I feel it is important to involve young people in our riparian restoration work. They seem to love it, especially the really young workers.

The small students will remember what they have done and when they get the long term results, they should feel pretty good about their involvement. The planting process is made very simple, for their benefit. Adults punch a hole in the ground and place the plant in the hole, then the kids can add the soil and water the plant. Then the soil around the plant is carefully tamped with their feet.

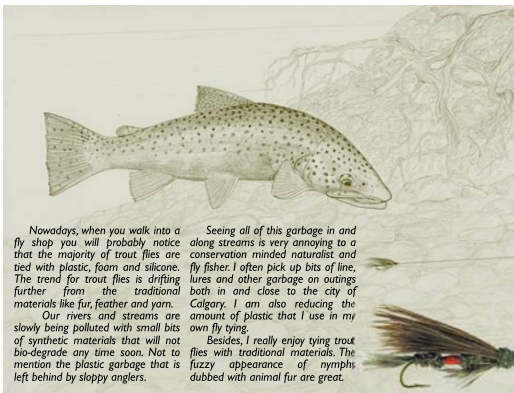
Bow Valley Habitat Development has worked with all age groups, in elementary, middle and high school, over the years. The most enjoyment comes from kids that are in elementary, because their extreme interest in the program shows. The younger groups dig in and get their hands dirty, because it is for a good cause.

It was a good year for the Glenbow Elementary kids willow plants, on Bighill Creek. The plants did well throughout the growing season and I am expecting a good survival rate for viewing this next spring. The school is located one block from the creek, so the kids can easily keep track of how their plants are doing.

Hopefully, these kids will return to the creek in years to come, just to see how things have changed on the creek and what their plants have grown into. I do this every year and really enjoy seeing the results. For a close observer, you can also see how the stream channel is cleaning up, over time. On Bighill Creek, the streambed is now showing its larger boulders and a good mix of cobble and gravel on the bottom.

At one time, there were huge volumes of mud and silt covering the streambed, but now the silt is slowly being flushed down the system and cleaner water is flowing in the stream. The erosion sites on the lower reach of the BH Creek have now stopped contributing tonnes of new soil and clay into the stream every year. The newly planted willows are holding the loose soil together and the stream banks are stabilizing. It is great to see this happen!

### Tying Trout Flies Traditionally - With Fur, Feather And Yarn



Nowadays, when you walk into a fly shop you will probably notice that the majority of trout flies are tied with plastic, foam and silicone. The trend for trout flies is drifting further from the traditional materials like fur, feather and yarn.

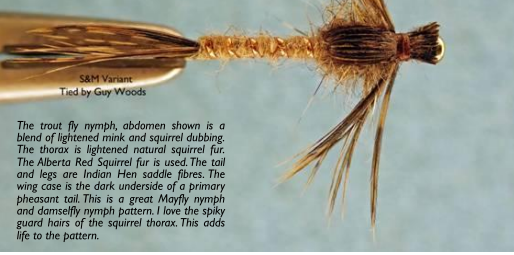
Our rivers and streams are slowly being polluted with small bits of synthetic materials that will not bio-degrade any time soon. Not to mention the plastic garbage that is left behind by sloppy anglers.

Seeing all of this garbage in and along streams is very annoying to a conservation minded naturalist and fly fisher. I often pick up bits of line, lures and other garbage on outings both in and close to the city of Calgary. I am also reducing the amount of plastic that I use in my own fly tying.

Besides, I really enjoy tying trout flies with traditional materials. The fuzzy appearance of nymphs dubbed with animal fur are great.

### Varnished French Tinsel in Oval

When I was tying Classic Salmon Flies, my materials collection of some very fine tying products was built up, over time. The French Oval tinsel is a great ribbing material in gold, copper and silver. On this variant nymph pattern, the copper worked great.



S&M Variant Tied by Guy Woods

The trout fly nymph, abdomen shown is a blend of lightened mink and squirrel dubbing. The thorax is lightened natural squirrel fur. The Alberta Red Squirrel fur is used. The tail and legs are Indian Hen saddle fibres. The wing case is the dark underside of a primary pheasant tail. This is a great Mouffy nymph and damselfly nymph pattern. I love the spiky guard hairs of the squirrel thorax. This adds life to the pattern.



Left Photo: This photo shows a small group of Glenbow Elementary students, planting willows along the stream banks of Bighill Creek, in the Town of Cochrane, Alberta. The photo was taken by their teacher Michelle Courage. You can also see willows from previous plantings, growing up from the water's edge. These plants are doing well and should survive the winter months.



Click Here to see the Previous Issue

Another Olive Pattern: The olive nymph has always been a common lake pattern with my style of fly fishing still water. A medium olive is a preferred choice. The copper ribbed pattern below is a good blend for that combination of olive and copper. I am also tying some silver ribbed patterns as well. The tail and legs are from an olive dyed Indian Hen saddle cape. They seem to match the color of olive dubbing that I was using on this fly.



### A Good High Flow Event Opens Up The Creek For Trout Migration

This summer, in July, there was a large precipitation event that led to some flooding on Bighill Creek. All of the beaver dams on the system were in a state of overflow and in many cases the beaver dams were completely blown out.

Following the July event, other smaller high flows in the later part of the summer, kept the beaver dams open for trout migration. I suspect a lot of trout moved further up the Bighill Creek is

and this all good for the trout fishery! More trout on the upper sections of the creek help keep recruitment coming down from the private property upstream.

This was the goal of Bow Valley Habitat Development and volunteers, a few years ago, but now it is occurring thru the natural process. I think this will be good for the trout fishery, in the long run. I know that there were enough small trout in the Bow River, near the mouth, that the

supply of new the generations of trout will be good enough to repopulate the creek.

The high flows this year will also enhance existing pool and run habitats, by making them deeper and even creating a few new ones as well. Not to mention the log or woody debris jams that will also provide new habitat for trout. Areas directly below beaver dams are usually spots where new pools are formed, after the floods.



Above: This photo was taken in July this summer. Note how the water plunges over the beaver dam, creating new pool habitat for trout.



Above: After the flood waters recede, the newly transformed stream channel is narrow, fast and deep. New vegetation will follow, in the weeks ahead.

### Deer In The Bush

During the rut or mating season, in November, the larger bucks come into Cochrane to find the does. If you spot the does, you will find the big bucks close by. They will usually bed down in the thicker brush and timber, but on occasion, you will find one that is easy to spot.

The large buck in the photo to the right; is a little tired and trying to catch some well needed rest. The warm sun helps out with the shut eye.

The antlers on this buck are pretty big - for a clear message to rivals.



Right Photo: This large buck was content just soaking up the sunshine, in a stand of tall poplar trees. These big rutting bucks get a workout at night, so they need some alone time during the warm days. The thick neck on the bucks shows that the deer are well into the rutting season. I like the mix of color in this photo. It also shows how well their bodies blend into the environment.



### Log V-weir - Pool Habitats

Probably the most highly effective pool habitats that I have constructed on small trout streams is the Log V-weir pool. The shape and angle of the log structure, directs the entire velocity and volume of flow into a self scouring pool habitat. The logs can be pre-fabricated and hauled into the project site, quite easily. The logs will last for years, once they are submerged. Extensive anchoring makes this structure a very durable and reliable fish habitat enhancement design. This structure is even efficient on moderate to low gradient streams < 2% slope.



I have just prepared a small article on how this structure was built. The design is one of Bow Valley Habitat Development's major breakthroughs in efficient self cleaning pool habitats. You can get to the article at this link: [http://streamtender.com/wordpress/?page\\_id=1489](http://streamtender.com/wordpress/?page_id=1489) There are a lot of photos to show the construction process.

This type of fish habitat enhancement is used to restore trout streams, compensate for damages to the trout stream or restoration projects. After many years in the stream channel, the logs turn color and they are very hard to see in the dense growth that follows. The landscape around the pools is left in a very pleasant natural state. Wild trout love these pools and the added cover habitats included in the design.

