

Stream Tender Magazine



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All views and opinions expressed in this magazine are solely those of the publisher or contributing writers

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Magazine Mission Statement

Publisher/Editor Information

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A Young of the Year (YOY) Millennium Creek Brook Trout

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Millennium Creek 2017 Brook Trout Growing Fast



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Above: This Millennium Creek brook trout emerged from the gravel spawning beds one month earlier this January of 2017. The trout is fat and growing fast.

This Year's Riparian Plantings



Above: This native Salix willow plant was just planted along the stream bank on Bighill Creek.

Early Spring Fly Fishing for Trout



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Above: This fat brook trout found my trout fly pattern irresistible, on a cold early spring day, just after the ice left the stream banks.

Great Upper Spring Creek Trout Hatch



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Above: A newly hatched brook trout takes cover in the shallows of lateral margin habitat, after it emerged from the spawning beds this spring. This means that the Upper Spring Creek was a good one this year. This 2017 hatch on the Upper Spring Creek was a good one this year. This means that there will be plenty of new trout in the Bighill Creek this year.

West Nose Creek Update



Articles by: Guy Woods and Contributors

West Nose Creek's riparian plantings are starting to stand out. The plantings are part of the Bow Valley Riparian Recovery and Enhancement Program. This will be the fourth year of the program.



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Bighill Creek Plantings

It has been four years since the Bow Valley Riparian Recovery and Enhancement Program first started to plant on the Bighill Creek, in the Town of Cochrane, Alberta. The first crop of plants are now growing out over the water in many places along the lower section of the creek.

I am convinced that all of the plantings over recent years has contributed to an improvement in the water quality in the stream, with noticeable cleaner streambed substrate on the lower reach. The first crop of native willows and trees are now providing fish habitat on the stream channel, in future years the habitat will increase into the stream itself.

This improved water quality and new fish habitat is going to be of great benefit to the trout fishery on the Bighill Creek. Each passing year will see new gains in the overall objectives of the BVRRE Program's goals. A program well worth the undertaking.



Above: Bighill Creek planted willows after 4 years.

2017 Ranch House Spring Creek Trout Hatch Success



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Above: A pair of juvenile brook trout that hatched on Ranch House Spring Creek early this year. This hatch was a significant one for the small spring feeder Creek, to the Bighill Creek.

Important Discovery on Millennium Creek



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Above: Can you spot the brook trout fry in this photo? The light color on this trout fry is peculiar. There may be a reason for this. (See Page 8)

Nose Creek Willows and Trees are Growing

Right Photo: Nose Creek willow and tree plants are growing but slowly. In the first week of May, I visited the Willow Brook planting site to see how the native plants that we planted in previous years were doing. Because the creek channel had been modified with heavy equipment years earlier, the soil along the stream was very poor for planting native stock. However, after planting work in the past, we are now seeing some growth along the stream channel.

The good news is that the seeds from these plants will help recruit new growth downstream into the future. This is the nice thing about our work, there are other riparian benefits that will come through the natural process.



March Brown - The First Big May Fly Hatch on the Water

Right Photo:

This March Brown May Fly hatched on the Bighill Creek in the first week of May this year. The large Mayfly is the first big Mayfly hatch to appear on local waters. On the Bow River and other area trout streams, the trout will feed heavily on this first big surface Mayfly hatch of the season.

The dry fly imitation for the March Brown is a size 14 parachute or traditional dry fly. An Adams dry fly is the most common pattern used to imitate this major hatch of the early spring season. The speckled wings and dark spotted segments of the abdomen make the adult Mayfly easy to identify. The adult fly also has two tall terminal end.

It was great to see this hatch on the Bighill Creek this year and it may have something to do with the improved water quality on the BH Creek.



Articles on Trout Fly Patterns in This Issue



Students Riparian Planting on Nose Creek, Airdrie

Above: CW Perry Middle School Students help out in Planting Program on Nose Creek.

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The 52 Buick Nymph - A Fly Pattern Variation

The 52 Buick nymph was one of the early fly patterns that were a common choice in this area, many years ago. The pattern was a hot one on BC lakes in the early days as well. If you ask any old timer about the 52 Buick, they are probably familiar with the fly.

Locally, I know that Gary Parkin use to fish this fly on a regular basis. He once told me that it was his favourite fly pattern for the local Bow River trout. It is my guess that he still uses the Buick, but they are getting harder to find in some fly shops.

In Alfred G. Davy's book, "The Gillye", published in 1985, Alf gives credit to Gary Carlton, of Edmonton, for first introducing the pattern. Alf was a well known, Kelowna, BC fly fisher and writer that had a good grasp on the history of fly fishing the Kamloops lakes region of the province.

The original pattern was an olive color nymph, with yellow tail and hackle, but many variations have been introduced over the years. My own preference for the pattern was for a more Palomino color of nymph, with barred tail and leg soft hackle.

It is the peacock thorax that distinguishes the nymph, so variations in the abdomen and soft hackle can range wide. In recent years, I added the Mylar pearl flashback over the thorax to give it a bit more sparkle. This seems to have worked well for my own variation.

Of course, tying the pattern with a bead head helps to get the fly down to where the trout are often holding. The brass color of bead is a mainstay for most of my own bead head patterns and again, it seems to work ok.

I recall looking at one of Gary Parkin's patterns and it had the classic barred lemon wood duck legs and tail on his pattern. This was the common choice of fly pattern variation for many years and also today. If you go online and research the fly you will probably see more olive variations than any other color, so sticking to the original color mix will catch trout in most situations.

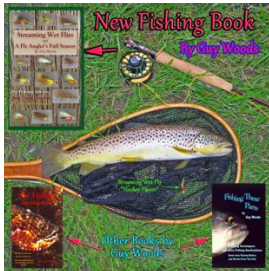
For many years, the 52 Buick shared popularity with the famous Doc Sprately, so this will give you an idea of the trout fly's importance. You should have some of these nymph patterns in your fly box.



A Variation of the 52 Buick Nymph

"A variation of a particular fly pattern is often the result of not having all of the necessary materials to tie the true original. This is quite common for most fly tiers. When you are short one or two specific materials to tie the pattern that you need, improvisation is the key. Rather than make a special trip to the nearest fly shop to buy what you need, another option in material choice may do just fine. In the end, you may find that your variation works just as well as the original. For me personally, I have found this the case on numerous occasions, during the winter months, when a trip to buy a few dollars worth of a specific material is not really that necessary. I usually end up being satisfied with the completed fly pattern."

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West Nose Creek Riparian Plantings Update

I really enjoy visiting riparian planting sites that have been planted in previous years. It is nice to see how the native willows and trees are coming along. The plantings that we have completed on West Nose Creek in Calgary are still quite small when compared to mature plants, but they will transform the landscape over time. The future overhead cover and shade will be of major benefit to the stream's brook trout population in a few more years of growth.



Above: A pair of newly emerged brook trout fry compete for food in a shallow water habitat. Only one will win the territory eventually.

Early season is the best time of the year to take photos of recently planted willows and trees, before the summer growth of shoreline grasses and sedge.



Watching Newly Hatched Trout Grow

Ranch House Spring Creek got special attention in late March of this year. The reason being was this year's brook trout hatch would be really significant to the trout population in Bighill Creek. With the record spawn totalling 32 redds in the fall of 2016, a successful hatch would mean a lot to our local fishery.

I made a lot of trips to the stream in the late winter, hoping to document the start of emergence of brook trout fry from the gravel spawning beds. The first trout to appear resulted in a huge feeling of relief, knowing that there would be at least some hatch this year. As the days progressed into April, more trout were appearing in the quite lateral margins along the stream.

On April 3rd, while inspecting the creek, a larger number of brook trout fry were present and fortunately, I did manage to take a number of photos for my records. By this time I was confident of a major hatch for the year, with plenty of new trout for the Bighill Creek, which was only a short distance downstream.

After spotting a pair of brook trout holding just below a water pocket, I set myself in position to watch the young trout for a while and hopefully take a few photos. Unlike most of the other trout that I had encountered on my tour, these two seem to be more comfortable with my presence.

Over a 10 minute period, I watched the young trout feed. I didn't know what they were feeding on, but its sudden movement to intercept small items moving in the slow current was catching their attention. For trout this young, I believe that they have to learn what to eat, so much of what they move to feed on may not be of any use in the end.

Near the end of my observation, one trout made a quick darting burst toward the other trout, which demonstrated just how competitive the young trout are, when it comes to territory. Over time, only one of the two trout would win ownership of that little piece of still water habitat.



Above: A tiny brook trout fry lays motionless on the bottom of a shallow habitat. Some overhead cover gives the trout a sense of security.



Historic Records of Cutthroat Trout in West Nose Creek

Back in early March, Elliot Lindsay of Trout Unlimited Canada, tipped me off about a historic document confirming the presence of cutthroat trout on the Nose Creek system prior to the 1900s. I find this type of information very interesting, because much of my time is spent researching and working on West Nose Creek in Calgary.

The document came in the form of field notes from a 1894 survey completed for the Minister of the Interior, for the Dominion of Canada. A surveyor by the name of Sam Brabazon was contracted to complete a survey of Township 25, Range 1—W5. Which covers an area in the City of Calgary and surrounding land.

The field notes were quoted in a book of the Nose Creek Historical Society, titled "100 Years of Nose Creek Valley History". In the book, the field note of Sam Brabazon states the

following:

"Nose Creek is a beautiful clear stream about 4 feet wide and 2 1/2 feet in depth, with green bottom and runs thru a deep ravine, banks of 250 feet high. I'm sure they omitted to state (survey crew) that they'd hooked off for a few hours to catch a fresh cutthroat trout supper for the crew."

I suspect that in actuality, the surveyor was talking about West Nose Creek in this description. I know the watershed very well and the only place that fits the description of having ravine valley banks that high, is the lower few kilometers of West Nose Creek, before it enters the main-stem of Nose Creek. The West Nose Creek would also have a channel width and depth similar to what Sam Brabazon stated. This is the first bit of historic documentation that confirms native cutthroat trout on the Nose Creek

and tributaries. For me personally, I can pass on this information to the volunteers that are participating in the riparian recovery plantings that we are working on these days.

I also find it very interesting that there was a native population of cutthroat trout that far east of the mountains, on the north side of the Bow River. Because the headwaters of the Nose Creek and West Nose Creek are spring creeks and not mountain streams.

Before this important tip on the history of the Nose Creek fishery, all that I had managed to acquire was that West Nose Creek had been stocked with rainbow trout up until the early or mid 1960s. This information was obtained by talking to some old timers that had fished the West Nose Creek back in the day. Understanding the historic distribution of native trout is important for future fisheries management objectives.

One Month After Emerging From The Gravel

Every New Year, during the first few months, I like to visit Millennium Creek to monitor the newly hatched brook trout and get an idea of how good the hatch is. This year was no different, and by the first of March I could see that there were good numbers of new brook trout to feed the Bighill Creek system for another year.

The best times to visit the creek are on sunny days when the winter midge hatch is in progress. This brings the small trout fry out of cover, so that they can feed on small midge pupa and emerging adults. All of the brook trout fry that I photograph and observe in the stream are in good condition, with

plenty of food to maintain their young bodies. On some days, the small trout are very hard to spot, lying motionless over the gravel covered streambed. Other days, they are actively moving about and they are easy to spot. It all depends on how much insect activity there is at the time. Often, I will need to bunker down and wait for a long period of time, before the trout are bold enough to come out of cover.

It is an extremely rewarding experience to see these small trout going about their business. Knowing that some day in the future, I may be lucky enough to tempt one on a fly.



Above: This small brook trout fry has been actively feeding for a month, since it emerged from the spawning gravel. The young trout blends into the bottom substrate.

"Having two spawning tributaries to the Bighill Creek, in the Town of Cochrane, is a unique and special privilege for the community. Both Millennium Creek and Ranch House Spring Creek have become important reproductive spring feeder creeks to the Bighill Creek, for brook trout populations. Due to the fact that both streams have been enhanced to create important spawning and nursery habitats through partnership/volunteer programs, is something that we can take pride in. In order for both streams to continue to function as trout recruitment tributaries, there is an ongoing maintenance program to keep both spring creeks accessible for spawning trout. This ongoing stream tending will continue on into the future, to insure a sustainable fishery on the Bighill Creek. As a fly fisherman, I look forward to experiencing the benefits of our efforts."

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Exposed Submerged Root Habitat

If the bottom of the stream channel is covered with mainly silty, aquatic invertebrates and trout rely on suspended habitat for cover and a place to live. Woody debris, weed beds, undercut stream banks, overhanging branches and grasses, as well as exposed submerged root systems play an important role.

Over time, all of this shoreline habitat will play an important role in cleaning up the streambed, if the flow in the stream is constricted and the problems causing silt loading is dealt with. In the mean time, both fish and invertebrate life need some type of habitat for survival.

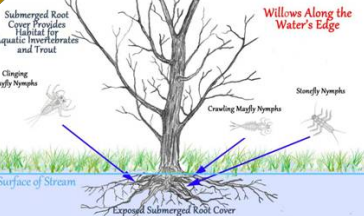
On many area streams, where the stream bottom is covered with silt, such as Bigbill Creek, West Nose Creek and Nose Creek, riparian growth will enhance life below the surface of the stream.

The root systems of willows and willows will help to stabilize the

stream banks, as well as provide important habitat for the occupants of the streams.

I often stop to inspect areas on other streams, where root systems are well established, while on a fly fishing trip it is impressive to see just how well a heavy network of poplar tree roots can armour an elevated stream bank. Also, any of these well established root systems will demonstrate excellent submerged fish and invertebrate habitat.

After witnessing the results of healthy riparian root stabilization on local streams, it is a confidence builder to know that riparian planting programs can have a tremendous positive outcome, over time. It may take years to accomplish, but there is no doubt of the end result. The Bow Valley Riparian Recovery and Enhancement Program is off to a good start in accomplishing this.



Trout like to hold below the overhanging limbs of Willows and under Root Systems

Bow Valley Habitat Development - Objectives

When Bow Valley Habitat Development was first established in 1986, the main objective was to organize partnership programs to carry out grass-roots fish habitat enhancement projects on the Bow River watershed. Later on, the habitat enhancement program was expanded to include riparian recovery and restoration.

There is a direct link between fish habitat and a healthy riparian zone along our trout streams, so the marriage of the two was a natural progression. Over the years, BVHD started to focus more and more on the riparian programs until 2012, when majority of the annual projects were riparian plantings.

Each year, work continues with a stream maintenance program, which is carried out on a volunteer basis, but the vast majority of time is directed at three area streams for the

planting of native willows and trees. The three streams are Bigbill Creek and tributaries, West Nose Creek and Nose Creek.

The long term goal for riparian recovery on these streams is to restore the fisheries in them. The program is still a one that is aimed at protection and enhancement, but the key title of restoration should be added to the mission statement. Two of the streams, both Nose Creek and West Nose Creek were in recent years close to be defined as lost causes, but now there are signs of renewed hope for their future fisheries potential.

Every year, more kilometers of stream bank riparian plantings are added into the program, on Nose Creek and West Nose Creek. As long as BVHD, our volunteer and volunteers work together, this will continue on into the future.

DFO Support Has Been a Major Asset

Over the past three years, the Department of Fisheries and Oceans Canada has been a major player in our Bow Valley Riparian Recovery and Enhancement Partnership Program. Many thousands of native willows and trees have been paid for by DFO, and this has resulted in the program being one of the largest riparian recovery programs in North America. For this support we are very thankful and recognize DFO's interest in our long term objectives. In 2017, awarding grants to support various worthwhile Canadian fish and riparian habitat enhancement projects was still undecided by May 1st, so it was at this point in time that BVHD decided to withdraw its application for support for the 2017 riparian planting program. This was unfortunate, but necessary.

It was required that all of the partners for the 2017 season's participation in the "Bow Valley Riparian Recovery and Enhancement Program" confirm their support by early spring, so that plants could be grown for the spring planting program. Due to this requirement, it was necessary for BVHD to cancel the application that was submitted in late 2016.

However, partnership commitments from other participants will still make this year's riparian planting program a major success. So far there are funds to provide over 8,000 native plants for this year. We would like to acknowledge and thank DFO for all tremendous contributions over the past three years.

April Willow Planting Inspection on West Nose Creek

On April 8th of this spring, I stopped by some of the planting sites for the Bow Valley Riparian Recovery and Enhancement Program on West Nose Creek, in the City of Calgary. Prior to the 2017 planting season, it is nice to have some spare time to inspect some planting sites from previous years of work.

As is the case when planting on some areas of the three streams in the program, native willow and tree growth varies. Where the PH level is good for plant growth, the plants grow fast, and other areas the plants will be stunted but well established. This is all part of riparian restoration, so over time, you become educated about the process.

On sites where plantings were completed in 2014 and 2015, some of the plants have been grazed upon by beavers and muskrats, but the plants are still alive and they will grow new limbs and buds. If a plant makes it thru the first few years, they are large enough to be targeted by beavers, so this can be expected. Muskrats and other rodents can be hard on young plants, but this is par for the course.

On that day in April, it was nice to see new catkins or seed pods on previously planted willows. This seed generation will enhance the riparian growth further downstream, by natural recruitment, an expected result of our program. As these plants grow to maturity, even more seed development occurs and establishment of new willow growth follows.

West Nose Creek has a very high muskrat and beaver population, considering that there is limited supply of native willows and trees for them to forage on. Especially, for the beavers. Without predators, voles and mice numbers along the creek in the City are extremely high as well. Despite this rodent situation, the program is producing results, just by the sheer number of native plants planted annually.

Each year, the riparian planting program moves further upstream. This year, planting will be conducted on a development property on the outskirts of the City of Calgary. By planting further upstream each year, natural recapture by seed broadcasting into the stream will provide great results.

This year will be the fourth year of the Bow Valley Riparian Recovery and Enhancement Program, so another planting on West Nose Creek will be substantial, with plenty of partnership commitment already in place. It is my hope that we can plant over 4,000 native willow and tree plants this season on the creek. Volunteer programs are already being organized for this year's planting season, which hopefully will begin in the first weeks of May.

One of the planting sites that was inspected on the 8th of April, is located just upstream of the furthest spawning site that was mapped in the fall of 2016. The brown trout spawning site was a key site with a total of 13 trout redds identified. If the trout egg incubation and hatch is as good as I think it will be this spring, there will be new habitat provided for those young trout, as they grow in future years. All because of our riparian planting program.

Further planting will be completed at this site and others in the near future, so more native willows and trees will mean that more fish habitat will be created over time on the creek.

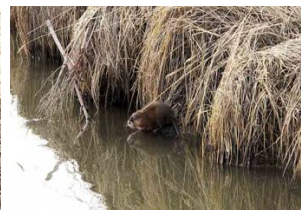


Above: Planted willows are producing seed catkins to recruit new willows along the stream, downstream of this site. This natural reproduction will enhance future riparian growth on West Nose Creek. This is an added bonus to our riparian planting program.

Above: You can see that a beaver has eaten two primary limbs of this planted willow, but the plant will continue to grow. This is a part of the natural process. Muskrats that feed on younger plants can do more damage than beavers.



Above: This photo shows one of the stream bank stabilization sites on West Nose Creek, which have been planted in previous years. You can see the new willow growing on the unstable soil of this eroding stream bank. This site is one of 96 stabilization sites that have been planted on the West Nose Creek, in the city.



Above: This West Nose Creek Muskrat is one of many on the stream. This animal is herbivore that will also feed on new shoots on willows and trees. Especially, on young plants.

The (TDHE) - Twisted Deer Hair Emerger

In a time of foam and plastic dry fly patterns, the traditional fur and feather flies are still a viable option for the dry fly fisher. One traditional dry fly pattern that I am quite content sticking with is the twisted deer hair emerger. It always catches trout when the opportunity and conditions to fish it are present.

Trout will sometimes focus their feeding exclusively on emerging caddis and mayfly nymphs. At these times, you need a fly that will suspend in the surface film of the stream or lake. Yet, at the same time, your fly pattern should be visible to the presenter.

A number of years ago, I was trying to figure out a simple way of using deer hair to keep my surface nymphs floating and visible for imitating emerging nymphs. I knew that the adult emerges from the back of the thorax area of a nymph, so this would be the right place to tie in the deer hair.

I found that if I twisted the deer hair as I was tying it in, I could create a tight configuration that was very buoyant and it was in the right position on the dry fly pattern.

The small twisted clump of deer hair imitated the adult emerging from the thorax and it was also visible from a considerable distance. I used soft hackle for the tail and legs to give the fly its motion as it hung in the surface film.

My first patterns were directed at imitating emerging caddis flies and later on I used it for emerging Mayfly nymphs. In both scenarios it worked very well and I catch plenty of trout to confirm its effectiveness as an emerger pattern.

To tie the deer hair in, it is first tied onto the hook shank. Then I twist the deer hair until the twist is tight. Then I use a needle bodkin to fold the deer hair back over and tie it in. Then the thorax dubbing is applied. Once you get the system done, it is very easy and fast to get the job done.

When fishing the fly, I apply a very light application of floatant to the deer hair only. I use pre-coak the rest of the nymph so that it will hold on the water in the correct position, with the majority of the nymph submerged, and only the clump of deer hair floating.

Twisted Deer Hair Emerger Nymph

Trout Unlimited Will E-Fish West Nose Creek

Trout Unlimited has agreed to "Electro Fish" West Nose Creek later on this summer. The program will investigate whether there was a successful incubation and hatch of brown trout eggs from last fall's spawning event on the creek.

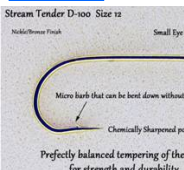
The site chosen for the survey is located at the uppermost key spawning site on the West Nose. Last fall a total of 13 brown trout redds were mapped at this site.

Hopefully we will find some of the trout from this hatch.

This type of study work on West Nose Creek will be of major benefit to understanding more about the brown trout fishery on West Nose Creek. With any luck, we may find some juvenile brown trout in the vicinity of where the trout spawned last fall. It may be dependant on whether any flood events flush the small trout downstream this spring.

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Fishery Sorely Missed This Spring

The spring fly fishing season on Bigbill Creek was sorely missed by local anglers this year. This includes myself. After many years of enjoying the spring brown trout and brook trout fly fishing on BH Creek, this spring I was spending a lot of time reflecting on the fishing regulations for 2017 has done to my favourite pastime. After talking to other keen fly fishers that fish the creek, they also are at a total loss for understanding why the new regulations "have left them out in the cold".

Like me, all most all of those local fly fishers have spent a lot of their free time in the past, working as volunteers on improving the trout fishery in the Bigbill Creek. Now they are rewarded with a closer of the spring sport fishery. The real bummer about the new regulation change is that it doesn't benefit the fishery in any way. Both brown trout and brook trout are fall spawning fish. So closing the creek for angling in the spring is of no benefit for them.

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Ranch House Spring Creek Trout Hatch 2017

This was an important year for the Ranch House Spring Creek fishery. In the fall of 2016, there was a record spawning event on the creek. A total of 32 trout redds or egg nests were mapped on Ranch House Spring Creek. The successful incubation of those trout eggs deposited in the gravel would determine whether a new generation of trout would be recruited into the Bighill Creek system.

Prior to the 2016 spawning season, Bow Valley Habitat Development volunteers made sure that the creek channel was free of any obstructions that would prevent passage of spawning brook trout up the system. Special attention was given to the lower reach of the creek where new deposits of spawning gravel had been created by run-off events, enhanced by storm drain inflow from a new development to the northeast of the creek.

The storm water inflow has caused major problems for the Ranch House Spring Creek, since it was constructed in 2010 or 2011. The high volume of flow coming from the storm drain has altered the natural stream channel, widening it and creating shallow areas and woody debris jams along the entire lower section of the creek.

With a lot of work, the problem of obstructions has been dealt with by volunteers, but the channel widening is something that will have long term impacts of the ability of brook trout to reach the spawning areas further up the creek. Fortunately, some of the trout eggs from the 2016 spawn are hatching and new trout are emerging from the gravel.

I have been visiting the stream during the later part of March and I was very excited when I spotted the first new trout fry on March 22nd. It wasn't until March 26th that I was able to get close enough to a small trout to take its photo. As a small bubble floated on the surface of the quite backwater, a small brook trout fry held still long enough to take a photo. The tiny brook trout was holding close to some submerged woody debris, where shelter and cover was close at hand.

Fortunately, our volunteer time and efforts has paid off and a new generation of brook trout are starting to replenish the Bighill Creek populations. This rewarding event is enough to build enthusiasm for future work on the creek and this next fall another maintenance program will be organized and carried out on Ranch House Spring Creek.



Spawning map showing the 2016 spawning season on Ranch House Spring Creek. The survey showed record numbers.

Stream Channel Erosion on RHS Creek

The once narrow stream channel on Ranch House Spring Creek is now getting wider with some stream banks collapsing every year from undercutting. When the channel was narrow and deeper, spawning trout could migrate up the system to spawn, but now there are a number of shallow tailouts where passage is impossible during normal spring flows. This will have a negative impact on the creek's historic trout population's survival.



This is a photo of the Ranch House Spring Creek channel prior to the installation of the storm drain outflow on the creek, in 2010 or 2011. The natural channel width was narrow, but possible for spawning brook trout, with plenty of cover habitat.



This March 28th photo shows how much the channel has widened over the past 6 or so years, since the storm drain was installed on the RHS Creek. The stream bank on the near side is about to collapse into the stream channel.

Below: Can you spot the brook trout fry in the photo below? Newly hatched brook trout blend into the stream bottom and will lay motionless to avoid predators. This makes them hard to spot. Even for an experienced eye.



Ranch House Spring Creek's Future

Despite the efforts of Bow Valley Habitat Development to get the location of a development storm drain outflow on RHS Creek changed, the storm drain is still in place. Even worse, a new phase of residential development's storm water infrastructure was tied into the same outflow recently.

This new added volume of surface water run-off has increased the impacts on RHS Creek and its future as a spawning and nursery habitat for brook trout from the Bighill Creek.

Over time, the natural stream channel on the creek is being eroded, widening it more than the narrow stream channel had once been. During normal spring flows, the limited water volumes flow over wide shallow areas on the creek, making trout migration difficult and in some cases impossible.

This erosion will continue to happen over time and the future of the stream's ability to support a trout population, including spawning trout, will be in jeopardy. This is a major concern for me.



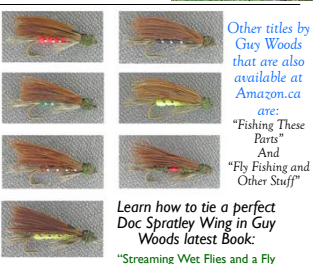
The outflow of a storm drain on RHS Creek, during a rain event in the residential development. The development is located just on top of the Bighill Creek Valley. This was from the Phase One development, now there is a Phase Two tied into the same outflow.



You can see how much turbid water there is from the storm drain outflow on Ranch House Spring Creek. This is just too much for the existing natural stream channel to handle and the result is major erosion problems on the small trout stream.

Right Photo:

The Ranch House Spring Creek photo to the right was taken in 2009. You can see how narrow the historic stream channel was, with plenty of good spawning habitat. The water also ran clear throughout the year, maintaining cool temperatures during the hot summer months and warm temperatures during extremely cold winter months. A perfect spawning and rearing habitat for Bighill Creek brook trout populations. Now this has changed.



Other titles by Gury Woods that are also available at Amazon.ca are:
"Fishing These Parts"
And
"Fly Fishing and Other Stuff"

Learn how to tie a perfect Doc Slattey Wing in Gury Woods latest Book:

"Streaming Wet Flies and a Fly Angler's Full Season"

Available at Amazon.ca



The "Gamer" - Streaming Wet Fly

Since I published my book "Streaming Wet Flies and A Fly Angler's Full Season" in 2012, I have discovered some new wet fly patterns that are very effective on area streams. One of the new patterns I call the "Gamer". In an age of computer gamers, I thought that naming a trout fly after this pursuit would be appropriate.

On some of the local brown and brook trout streams that I fish on a regular basis, it is sometimes necessary to come up with a new design of trout fly pattern that the resident trout have yet to be introduced to. It is a dilemma that most fly fisher's should also hope to have. If you have caught and released much of the trout population on a given section of stream, they become well educated in a relatively short period of time.

Because the Streaming Wet Flies that I often use are attractor patterns, they are not fished during a main insect hatch when trout are more often easily fooled into a take. Rather, the color combination may trigger a reactive strike, probably instigated by a curious trout. Either that or a territorial reaction.



The "Gamer"



This Nose Creek Pike was the first large one that I caught on a fly rod in 2012. On my first outing that year, I managed to catch 4 nice pike in a little over an hour's fly fishing time. This was an exciting new discovery for me. It was the first year of riparian planting work on the creek and finding a resident pike population added a lot of encouragement for the planting program's future on the stream. Since that first fly fishing trip to Nose Creek, I have caught and lost some very nice pike. I know that Junker still lurks in the depths, so I will continue my quest to catch it.

The Gamer fly pattern has a bouquet of peacock herl or sword for a tail, which is common on many of the Stream Wet Fly patterns. The fly also has a yellow under-wing, sometimes tied with a fluorescent yellow to add a bit of brightness to the pattern. I tie this pattern in both size 8 and 10 for local waters.

The throat hackle for the pattern is a combination of red with a soft hackle partridge over top. As is the case with most of my wet fly patterns, call tail is the best wing material. An olive head, with red eyes finishes off the pattern. I tie this pattern in both size 8 and 10 for local waters.

Streaming wet flies all have barbells eyes, so there is enough weight to take them deep on a dry fly line, but you can also fish them on a sinking line, depending on the depth of the stream. Local brown and brook trout streams seem to all have a bit of turbidity to the color of the water, so the bright colors of Stream Wet Flies stand out great when submerged. I catch a lot of large trout on this and other Streaming Wet Fly patterns.

This is the first brook trout fry that I photographed on March 26th, 2017. The tiny trout is from the 2016 spawning season on Ranch House Spring Creek.

Nose Creek Pike Fishery - Great Fun on a Fly Rod

It was on the first day of riparian planting in 2012, that I discovered a very important bit of knowledge about Nose Creek, in the City of Airdrie. It has pike in its waters and they like to take Streamer Wet Fly patterns.

When I arrive to the planting site on that first day, I notice some rather large fish were breaking the surface of the stream. At first, I thought that they might be suckers, but when I came across a dead pike along the shoreline, my suspicions took a whole new direction. It was at that point in time that I knew I would have to return to the same spot with my fly rod, in the near future.

Only a few days later, I was on the creek with my fly rod, and a selection of pike back-tail streamers that I knew worked well for pike. A sinking 7 weight fly line and a fast action rod were my choice for this first adventure on Nose Creek. It was early in the morning, the same as it had been on that first day of willow planting, so I did see some more rising pike on the creek.

It was decided that the best approach to attempt a catch on that first day, was too cast to fish that were actively working the surface. This method worked great, with my first pike caught on the first cast. The pike that I caught and released was in a narrow reach of the stream channel and I had spotted it pushing the surface water from a distance. This was real pike hunting, at its finest.

It was at that first hook set that I knew that I was in for some good fun that morning. The next three pike were a little harder to find and catch, but that is fishing for you. By the time I had tags to work, it had been a little over an hour and I had already caught and released 4 nice pike. The fish were all in fine form, with no signs of parasites or disease. Except for the pike that had part of its tail removed, probably by a predator.

You could tell from the fat bodies on the pike that there was a good forage base of minnows and suckers in the creek. Later on, in 2015, I would find out that there was also crayfish present in Nose Creek. Crayfish are a great food item for growing large pike in a short period of time.

Over time, when the water quality in Nose Creek improves, the pike fishery will also grow in numbers and prove great sport fishing opportunities. The riparian recovery work will benefit the pike populations as well, but this will take time.

In recent years, while working along the stream in the City of Airdrie, I have had the opportunity to meet a number of residents that also fish the creek for pike. One older timer told me that he had caught a 6 lb. pike on a worm, while fishing a spot, just a short distance from his house. He went on to tell me that he was just as surprised as I was, to find pike in Nose Creek. The old fellow has fished the creek many times since.

"New Bow River Regulations - Not Well Thought Out!"

As of 2017, there are sweeping new regulations for sport fishing on the Bow River. Now, from Banff downstream to Bassano, the season is open all year with a 0 trout limit, which is ok with me. However, this new blanket regulation of no angler changeouts is very frustrating. Sport anglers are stakeholders in the resource and when measures that will threaten their resource hunting, it is time to write some letters (emails).

Up until 2016, local trout streams in our area fell under the definition of tributaries to the Bow River, between the Ghost Dam and Bearsap Dam. Under this umbrella of regulations, there was a harvest limit of one trout under 35 cm in length allowed. This was only for a time window between June 16th and October 31st.

In the new 2017 regulations for the Bow River, there is no mention of tributaries, so streams not listed in the specific regulations list all under the Zone ES-1 guidelines for trout harvest on streams in that zone. This means that now anglers are allowed to fish with cutthroat trout over 35 cm in length. This is very bad news for streams such as Spencer's Creek, Grand Valley Creek and Big Hill Creek.

The Big Hill Creek is a stream in the first stages of recovery for the once sport objectives and the recovery is under threat. After years of work and many thousands of dollars of restoration efforts, the sudden allowance for the creek to be a large scale will be a step backwards in our entire program.

This new regulation change was not thought out very well by our fisheries biologists for this area. These are streams with wild trout populations and this approach will do anything but.

For conservation minded anglers, this type of fisheries management is very frustrating. Sport anglers are stakeholders in the resource and when measures that will threaten their resource hunting, it is time to write some letters (emails).

One of the things that also frustrates me personally, is how difficult it is to understand the fishing regulations, especially for specific trout streams. Often I am asked by individuals about the regulations for certain streams, because they want to make sure that they have interpreted the guidelines correctly.

With trout streams like the Big Hill Creek located so close to a major city like Calgary, why is there no listing for the creek in the regulations? Another trout stream that is receiving major restoration work to recover the fishery is West Nose Creek, in Calgary. Why is there no listing for this stream in the regulations as well?

In modern times, the old fashion approach of killing wild stream trout to eat is not sustainable. Streams are not stocked and are not totally dependent on natural reproduction to maintain populations. They need to be protected to continue this natural process. If they are not protected, the fishery will collapse from over harvest of mature trout.

Obviously, when the new regulations for the Bow River were decided upon, the managers for our fisheries did not consider three trout streams in our area. With the new regulations in place, I now have grave concerns about what the long term impacts of this change in harvest limits will result in. It could be a disaster for my beloved Big Hill Creek trout fishery.

Despite this new development in what I consider poor fisheries management, I will continue with my efforts in restoration work on these local trout streams. Bow Valley Habitat Development and its partners are presently focused on riparian recovery work, which will provide more trout habitat and improve water quality, but the protection of the trout in those streams that we are working on is still the responsibility of our provincial fisheries biologists. So it is up to them to make their contribution in the recovery program.

I contacted Trout Unlimited Canada and the provincial regional fisheries biologists about this matter, to let them know let them know my thoughts about the changes to the local trout stream regulations and the concerns. After a long response time, they let me know we are not on the same page. They provided their opinions and rational, but I found it difficult to understand. Somehow they both thought that an increase in harvest of mature trout would benefit the fishery in some way.

Another change in the fishing regulations for the Big Hill Creek is the season opener for sport angling. Last year and for many years the opening day on the Big Hill Creek was April 1st. Now, under the new regulations, it is June 16th. The June 16th opening day on many of Alberta trout streams is in place to protect the spawning cutthroat trout and rainbow trout populations.

So why is it in place for the Big Hill Creek now? There are no spring spawning trout on Big Hill Creek, it is a brook trout stream. Brook trout fishery was both of these trout species spawning in the fall of the year. So there is no benefit in having a late season opener for sport fishing. Now, some local fly fishers and myself included, have to wait another 2.5 months to fish the Big Hill Creek. What a waste in a popular recreational opportunity.

"It is difficult for many people to understand our provincial fishing regulations. I personally would grade them poorly. In my mind British Columbia fishing regulations would get an A+."
Maybe a thicker guidelines publication with more streams listed in the Alberta regulations would help."



"A Fly Fishers Creed"

The only thing that you should leave a trout stream with - one memories of a great day of fly fishing."

A Test - How Good Are You at Interpreting the Fishing Regulations?

The test is too find out whether it is legal to use parts of smelts for bait on the Spray Lakes Reservoir. See how long it takes you to find this out in the 2017 fishing regulations.
You can find the listing for Spray Lakes in the zone ES-1, on page 37 of Alberta.

Riparian Recovery - A Slow Process

After many years of intense livestock grazing on a stream's riparian zone, there isn't much left of the historic native willows and trees that once flourished along the stream banks. Once the network of roots and cover is gone, there is nothing to hold the top soil and organics that made the riparian ecosystem a rich environment for growth.

Over time, many floods will slowly deplete the remaining rich soil by washing it away, until only a clay substrate remains. This clay has a pH level that is too high to promote natural recruitment of new native willows and trees, so recovery may take hundreds of years to happen, if it had a chance.

The best pH level for growing willows and trees is between 5 and 7.5, so some type of organics that can bring the higher pH levels down is required. New native riparian willows and trees can enrich the soil with these organics, but it takes time and a considerable amount of work.

The best way to speed up the process of riparian recovery, is to conduct plantings of native willows and trees on areas of stream banks where there is no livestock. It is a difficult and slow process, but it can be done. The areas for planting must be those where livestock is no longer allowed, such as environmental reserves or properties within the boundaries of cities and towns.

The "Bow Valley Riparian Recovery and Enhancement Program" is actively planting within the city limits of Calgary, Airdrie and the Town of Cochrane, on streams where plantings will speed up the recovery of healthy riparian zones.

The streams are Nose Creek, West Nose Creek and Big Hill Creek. It is a very exciting program and 7.5, so some type of organics that can bring the higher pH levels down is required. New native riparian willows and trees can enrich the soil with these organics, but it takes time and a considerable amount of work.

"Two Local Trout Streams Need Special Protection"

When a decision is made to restore a fishery on a trout stream, there will definitely be a lot of partnership money needed. Along with the dollars, a substantial amount of volunteer support is also required.

In most cases, cooperation with the provincial regional biologist is necessary and the Department of Fisheries and Oceans Canada is the primary partner in all of your efforts. In my area, Big Hill Creek is a good example. Starting in 2004, the ground work for a restoration allowance in the creek began a large study titled, "Long Term Master Plan for the Protection and Enhancement of Cochrane Streams" was completed in January 2004, the Millennium Creek restoration program was initiated, in 2005.

Millennium Creek is a small spring fed tributary to the Big Hill Creek. Its restoration was completed in 2008, brook trout began spawning on the stream in the same fall after the restoration program was completed. This successful fisheries enhancement program was the first endeavour undertaken by Bow Valley Habitat Development and its partners.

Since that first major project, hundreds of thousands of dollars have been spent on the Big Hill Creek fishery restoration program. Presently, the "Bow Valley Riparian Recovery and Enhancement Program" is well underway, with thousands of native willows and trees planted on the creek annually.

In the year 2014, a similar fisheries restoration program was started on West Nose Creek, both in the City of Calgary and upstream. Since that year, the recovery of resident brook trout in the West Nose Creek is showing recovery on its own, but the riparian plantings that are being completed will only facilitate the recovery of the fishery. The recovery of the riparian zone along the creek will provide future habitat for the trout and it will also help improve water quality in the creek.

Big Hill Creek has already shown signs of an increase in trout populations. One of the highlights of this program was the recent appearance of mountain brook trout on a spring creek tributary, a number of kilometres upstream on the creek. This is a significant blow to our objectives. Right after learning about the new regulations, I made another attempt to spark up a little interest in the issue of trout harvest on the creek, with the local regional biologists for our area. Their response left me a little puzzled. Bottom line, they didn't seem to agree that regulating a 0 harvest limit on the trout recovery in the future, but the work must continue to help the population increase over time.

At this point in time, it is my opinion that the trout population in both Big Hill Creek and West Nose Creek needs to be protected to help in the long term recovery of the fishery. Presently, there is a two trout harvest limit allowed on both streams which is no help in the restoration program. As volunteers help out in the programs, the last thing that they need is to see limited numbers of trout, especially mature spawning trout, harvested from either system.

In recent years, a number of letters have been sent to our regional fisheries biologist, hoping to get some type of special protection for the Big Hill Creek trout population, but nothing has happened yet. It is very frustrating to know that they don't seem to be too interested in what we are trying to achieve, which is the protect and enhance of the trout fishery.

The new regulation change that came about this year is a significant blow to our objectives. Right after learning about the new regulations, I made another attempt to spark up a little interest in the issue of trout harvest on the creek, with the local regional biologists for our area. Their response left me a little puzzled. Bottom line, they didn't seem to agree that regulating a 0 harvest limit on the trout recovery in the future, but the work must continue to help the population increase over time.

Four Years on the Fallen Timber Trout Stream

One of my favourite brook trout streams is the Fallen Timber. Further up the creek there are good numbers of brook trout as well, so depending on my interest on any particular day, I may fish the upper reaches or further downstream where large brown trout reside in some wonderful trout habitat.

Up until 2012, there was a two trout harvest limit for brown trout over 40 cm, which was hard on the supply of mature spawning sized brown trout, but in 2013, the regulations where changed to protect these trout. The same protection for brown trout that year also saw the limit for mountain whitefish change to 0 catch.

I remember being very excited about this new change in regulations for that year. With this new regulation in place, the numbers of large brown trout and mountain whitefish would increase over time. Mountain whitefish are a great forage fish for large brown trout and even a few bull trout that still reside in the stream.

At that point in time, I really thought that this new change would result in a huge improvement to the trout fishery over time. Then, in 2015, another new regulation for the stream came into effect. The brown trout would still be protected, but other trout would be vulnerable.

As of 2015, the daily catch limit for trout was back to 2 per day, but the catch on brown trout was still 0, which was good news. Unfortunately, the mountain whitefish limit was listed at 3 per day, over 30 cm. Since that change in 2015, the regulations have been consistent up until this year. However, you just never know what the future holds these days.

The present regulations for trout harvest are bad news for the few remaining bull trout on the Fallen Timber. Bull trout are still often misidentified by many anglers as brook trout, so some will end up getting a knock on the head when caught. Despite the efforts to educate trout anglers, the bull trout pays the ultimate price all too often.

With the new spring closure on Big Hill Creek, for fly fishing this year, I will definitely make a few extra trips up north to the Fallen Timber to try fishing for brown trout. It is a nice thought to know that this great trout fishery has received special attention by fisheries managers in recent years, even if the regulations seem to indicate a trial and error approach.

This example of how management policy for a trout stream can change dramatically over a four year period, gives you an idea of how complex the job of management is. It also makes it quite clear that you should always read the regulations.

Above: This is the West Nose Creek, just upstream of the City of Calgary, on pasture land where livestock have grazed for over a hundred years. There is no sign of historic riparian willows and trees on the property.

Mitford Trout Wintered Over This Year

It was April 6th when I received a phone call from fishing buddy Eric Schumann; he had some good news to report. Eric had been fly fishing on the Mitford Trout Ponds that day. While fishing the lower pond he caught 3 trout, the lower pond and one on the upper pond. This means that some of the trout wintered over this year, despite the heavy duty cold and snow.

All of the trout were about 12 inches and in good form. With a few trout found this early, prior to our stocking program, we can expect some large trout to be available to young anglers that spend time fishing the trout ponds. It is always nice to know a few monster trout are available to catch in the trout ponds.



Fishing the Mitford Trout Ponds Chromomid Hatch

In the 1980's, I made trips to lakes in the southern part of the province of BC, specifically to fish the spring chromomid hatches. It was an exciting new experience for me, and I spent most of my fly fishing time on stream fishing. A new adventure was always waiting for me.

What prompted me to take these trips was the result of reading various articles and books on the topic of fishing lake midge hatches. At the time, this different type of fly fishing was growing in popularity and I wanted to be part of it. Fortunately, my first outings were good experiences with plenty of lake rainbows, bottom cut trout to show for my efforts.

Due to my present day commitments for spring riparian planting projects, I only chance I get to fish a chromomid hatch is on the local trout ponds, or the Bow River. Having a few small trout ponds close to home is a real treat, so this spring I visited the Mitford Trout Ponds to fish the midge hatches.

My timing for that first trip was perfect, and trout were actively feeding the surface, concentrating on some very small midge pupa. The result was that once I found the right size and color, I had some real fun that day. The trout were small, but very cooperative and good fun on a light weight fly rod.

When I head to a lake or pond, during the spring hatching times, I always have a good selection of Chromomid pupa patterns in my fly boxes. Both a wide range of colors and hook sizes are a must. With head beads, for tying a sinking pupa pattern, the need for a split shot is no longer required as a fluorocarbon cutty on the end of your leader, and of course, a strike indicator.

If the trout are feeding in shallow water, on the surface, you can see your indicator only a foot or so up from your fly and catch trout. When the trout are not feeding on the surface, an adjustment to fish the pupa pattern near the bottom can work great. There is sometimes a lot of fly pattern changes and depth adjustments made, before you find out the right set up to catch trout.

On my first trip to Mitford Ponds, there were clouds of small adult midges flying around and getting in my face. I don't mind this annoyance, when the trout are cooperating. This is a good thing to have happen when you are trying to catch on what size and color of midge pattern to use. Just watch what is flying around in the air, next to you.

The color and size of the adults can narrow your search for the right fly pattern to use. Just make sure that you have a good supply of different flies to use.



Below: The old standard floss body chromomid pupa pattern is one of the simplest to be and most effective for catching midge feeding winter water. Black is the most popular color.

HOME

Midge Pupa Tying Recipe:

This version of the midge-chromomid pupa is tied with a floss for the abdomen, which is the classic pattern most commonly used to fish the hatch.

Hook: Curved Scud Hook
Tarsus: Orange
Gills: White wool yarn
Body: White wool yarn
Abdomen: Floss tapered body
Rib: Copper, Silver, Red wire
Thorax: Peacock Herl

Important to Note:

The floss for the abdomen is tied when the hook is in the site to tie in the white wool yarn. Slide the bead to the back of the bend before you tie in the yarn. Whip finish the yarn section behind the eye of the hook. Cut the thread. The firm yarn off and slide the bead forward over the tied in section.





Below: A juvenile brook trout feeds on small adult midge flies that are floating on the surface of a still water area of a stream. The midge are a big meal for the trout.



“Midges - An Important Food For Juvenile Trout”

Trout fry depend on small invertebrates for a food source, just after they emerge from the spawning bed. By then, their egg yolk sacs have been depleted and the trout are ready for a new source of nourishment.

Small invertebrates in their early stage of development are part of the young trout's diet, but by far the most important available insect is the midge. Midge's are a member of the Diptera or Two Winged Flies. There are more aquatic families in this order of invertebrates, that in any other aquatic invertebrate order. Which makes them very abundant for the trout populations.

Another advantage for the juvenile trout is that midges hatch year round, making them active and available for young brook and brown trout fry, right after the trout emerge from the spawning gravel. On some streams in our area this can occur as early as January. As long as the stream is ice free, you will see adult midges hovering over the surface during the winter months.

The common midge, some are also referred to as chironomids, which can vary in size, but the majority of the hatches are very small insects. The really small ones are of most interest to trout fry, because they can eat them without difficulty. The majority are only a few millimetres in length.

The midge is available to trout fry in a larval and pupa life stage, and eventually in an adult form, which is a small winged insect similar to a mosquito. I have watched small brook trout that were only a few cm in length, feed on adult midges that were floating on the surface of a still water shallows on a stream. Some small trout had great difficulty in swallowing the whole insect, but they managed in the end.

The midge can be found in all types of stream environments, from stagnant back waters to flowing rapids, where the larva cling to rocks or woody debris. The larva are easy prey for patrolling trout fry, which pick them from the habitat where they are found. Midge larva are an easy meal with little effort on the trout's part, which gets the young trout off to a good start in life.

I have found that where there is a good population of midges in a spawning tributary, there will usually be a good survival rate for any newly hatched trout. This makes the midge an important aquatic invertebrate to the well being of a healthy trout stream.

Trout will feed on this insect throughout their life, with some very large trout feeding on the smallest of midges during a hatch on the Bow River. I always have a good supply of midge fly patterns in my fly box, when I am fishing all trout streams. The most common fly pattern is the pupa imitation.

“The Midge Pupa are often called Chironomids by fly fisher's. They are long and slender, but the trout love them.”



“Early Spring Trout - First On The Water”

During the winter months, there is plenty of time to tie some fly patterns and hash over the previous season's memories on the water. As the temperatures dip below zero outside and the snow blows fiercely over the streets and sidewalks, the comforts of a warm house and a good stock of fly tying materials make a fly tying station a good place to spend some free time.

By the later part of March, thoughts are already turning to the new fly fishing season. A good stock of fly patterns, along with some new ties to try out, help build the anticipation of the first trip onto the water. Fortunately, a number of good trout streams are open for fly fishing on April 1st of every year, making the choice of destination an easy one.

Those streams that open early have a good population of brown trout and brook trout, so the opening day is early in the spring, unlike other area cutthroat trout and rainbow trout streams. This difference in the season opening day option is due to the fact that the brown trout and brook trout spawn in the fall, so by April 1st, the new generation of trout have already hatched and allowing anglers access is not a threat to the fishery.

The cutthroat trout and rainbow trout families spawn in the spring, so these streams are closed to angling so that the trout are not harassed by angling pressure while they spawn in the spring. Most streams, where cutthroat trout and rainbow trout are present, open for angling by June 16th, in most areas of the province. Which is a good thing.

Having a good brown and brook trout population locally is a real benefit for those that like to be on the smaller streams as soon as the ice is gone over the main part of the channel. On most years, this is the case by the first week of April or soon thereafter. A good portion of the Bow River, in and below Calgary, is also open year round, but this big water is a totally different experience than small stream fly fishing.

Early spring trout are still pretty lethargic from the cold water temperatures, so fly fishing for them can be a challenge. I have found over the years that slowing down your fly pattern during the presentation helps. For streams and nymphs that you retrieve, on each cast, you need to bring the fly back in at a slower speed. The trout will still take a nymph at a dead drift, but the take can be subtle and you have to be alert when setting the hook.

Also, due to the cold water temperatures, the fight of a trout when hooked will most likely be sluggish, but they will still have some reserve power if they are in good condition. Regardless of the less than challenging battle with an early spring trout, the reward of just catching it makes it all worth while. Early season fly fishing is slow, when compared to warmer water later on in the season, but this challenge makes it that much more worth your efforts if you hook into a good sized trout. I have found that early spring fly fishing is a great time to catch a large trout, probably because they are still a little groggy from the winter freeze up and dark days.

Riparian Plantings Showing First Signs of Pay Off

The Bighill Creek Riparian Recovery Program has been underway now for 5 years. Since it first started in 2012, a noticeable difference in the water quality on the lower reach of Bighill Creek has been noted. The highest level of improvement to the water quality has been a result of the stream bank stabilization plantings on eroding stream banks.

There are a total of 58 stabilization sites that are receiving ongoing plantings. The sites are no longer depositing huge amounts of silt into the stream channel on Bighill Creek. The newly planted willows and trees are helping to hold the unstable soil in place during critical spring thaw and run-off season.



Above: This spring, as the ice and snow melted on the Bighill Creek, the water clarity was especially good on the stream. Stream bank stabilization plantings have made a big difference in water quality on the lower reach of the Bighill Creek.

West Nose Creek Still Needs Plenty of Planting

All of the streams involved in the BVRRE Program, West Nose Creek has the highest need for riparian plantings, in the City of Calgary. With ongoing cooperation from the City of Calgary, the City Parks Department, other partners and volunteers, we can accomplish a lot on this particular property.



There is still stream channel on the West Nose Creek within the City limits that could use a healthy riparian habitat along the stream banks. This means years of planting are needed. This year, BVHD obtained permission from the developer on the plant. It is expected that next year, this will continue to happen. After this year's planting, we will have planted stream banks up to 16 kilometres from the West Nose Creek's confluence with the Nose Creek, in Calgary.

Handling Trout - Care and Consideration Required



Below: You can see how the gentle handling of a trout will allow a quick photo, before the fish is released back into the water. This small brown trout was netted and the hook was removed while it was in the net. The trout was caught and released on Mirford Trout Ponds.

In a recent conversation with a fly fishing buddy of mine, part of the discussion was focused on how inconsiderate some anglers are when they pull a trout from the water. My friend fly fishes the local Mirford Trout Ponds and he has observed small and large trout being jerked from the water, up onto the ground, and as the fish flops around the angler attempts to put a death grip on the trout to remove the hook.

If the trout survives the hook removal, it is often chucked back into the pond with its eyes bulging out from having the life squeezed out of it. This is not good for either the trout population in the pond or either the number of large trout that will grow even later, if they survive but catch and release practices.

If you handle trout with a gentle touch, they will usually cooperate while you remove the hook and place them back into the water. I can tell an anglers experience by the way they handle and release their catch. Years of carrying out this practise has taught them how to handle fish and remove the hook.

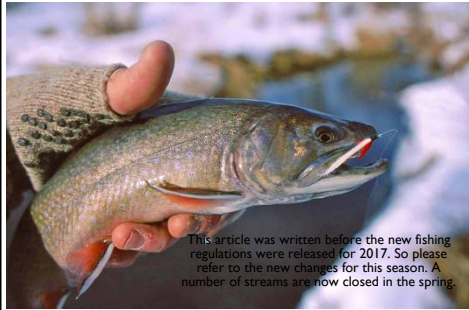
We all like to catch big trout. If we take care and consideration when we catch trout of any size, the chances for that fishes survival are greatly increased. The beneficiary is not only the trout, but also the angler that can catch larger fish into the future, if they are handled properly. Remember, a gentle soft touch will reduce the trout's resistance, while you remove the hook and release the fish.

Not handling and releasing your catch with care and respect for its survival is a sure sign of an inexperienced angler. Also, any onlookers may frown at such poor sportsmanship. I personally have observed this too many times throughout my own fly fishing past. It often affects the enjoyment of my own outing on the water. Many times I will suggest to the angler to go easy on the fish and they will have a better chance of life back in the water.

This is usually carried out when the angler is close enough that I don't have to yell. On most fly fishing trips, I use a net and a dry catch. The net is a handy tool for holding the trout while I remove the hook. Sometimes I do not touch the trout at all and simply dip the net back into the water for its release. If I handle a trout to take a photo or release it, I do so with a gentle grasp, applying minimal pressure to the trout's body.

If you handle trout with a gentle touch, they will usually cooperate while you remove the hook and place them back into the water. I can tell an anglers experience by the way they handle and release their catch. Years of carrying out this practise has taught them how to handle fish and remove the hook.

We all like to catch big trout. If we take care and consideration when we catch trout of any size, the chances for that fishes survival are greatly increased. The beneficiary is not only the trout, but also the angler that can catch larger fish into the future, if they are handled properly. Remember, a gentle soft touch will reduce the trout's resistance, while you remove the hook and release the fish.



This article was written before the new fishing regulations were released for 2017. So please refer to the new changes for this season. A number of streams are now closed in the spring.

First Plantings on Bighill Creek are Starting to Sucker

Over time, some of the new native willow and tree plants will start to produce suckers from their root systems, spreading out from the mother plant. Varieties of Salix, such as the Sand Bar willow (*Exigu*) will produce vast colonial colonies from a mother plant covering large areas of stream bank.

Other varieties of Salix produce suckers from basal shoots near the base of the willow trunks and these will thicken the ground the mother plant over time. It is nice to see the first stages of suckering on plants that have been planted in previous years. This indicates a thriving community of native willows for future riparian habitat along the stream banks of all of

the streams in the Bow Valley RiparianRecovery and Enhancement Program.

This thickening will continue to happen over the years and insure a dense network of root systems along the stream banks on the creeks. This is the fourth year of the "Bow Valley Riparian Recovery and Enhancement Program" so we are really pleased that the first signs of root recovery are taking place along all of the streams in the program.

The creeks that are listed in the program are Bighill Creek and tributaries; West Nose Creek; and Nose Creek. The program will continue on into the future and it is hoped that even more significant change will result.

Next Year's BVRRE Program

HOME

In the fall of 2017, Bow Valley Habitat Development will begin organizing the 2018 Bow Valley Riparian Recovery and Enhancement Program for the following year. This year marks the fifth year of the program and already BVHD is looking ahead for a continuance for 2018. So far we have planted close to 50,000 native willow and tree plants in the program and breaking that mark in 2018 would be a real milestone for the riparian recovery efforts.

We look forward to maintaining the same pace and to have involved some day one and possibly a few new ones for next year. As long as we continue to produce a positive result, I am hoping that this will be the key factor in our ongoing restoration work.



Below: This Salix Lasioandra on the Bighill Creek is showing the first signs of suckering new shoots at the base of the plant.



The Importance of Small Tributaries

Small spring fed tributaries are often overlooked in their importance to the fishery on a main-stem stream. The springs that feed them may only be a trickle and appear not to be capable of supporting trout, but I have been surprised over the years by just how important these small tributaries are to local trout populations.

The clean consistent flow of spring water provides an ideal nursery habitat for young trout. In the first year or so of their lives. In some cases, small tributaries are also used for spawning trout. The cold, clean spring water often flows over clean gravel substrate, which is perfect for spawning habitat.

Due to the limited precipitation catchments of a basin on a spring fed tributary, there often is very little erosion from run-off events or floods. The channel can be narrow from the limited spring water flow and this will provide lots of good habitat along the stream banks, for small trout. Good undercut banks are usually the best type of habitat for small young of the year trout.

In the Town of Cochrane, there are two small spring fed streams that have received a lot of attention over the past decade and a little longer. Millennium Creek and Ranch House Spring Creek have become important habitats for both spawning reproduction and nursery habitat. However, this was the result of a lot of hard work and some great partnership support, including volunteers.

Millennium Creek turned out to be a total restoration project that was carried out between 2005 and 2010. The small stream now supports both brook trout spawning reproduction and nursery habitat for a number of trout species. Ranch House Spring Creek, after the RHS Creek project in 2010, has now become a major spawning tributary to the Bighill Creek. The 2010 RHS Creek project involved making the stream accessible for spawning brook trout that once were restricted from accessing spawning habitat further upstream on the creek.

Both of these streams were just a trickle of water prior to becoming important arteries for the Bighill Creek trout populations. I have talked to plenty of people that were amazed at the fact that both of these spring flows are now trout reproduction waters. These individuals can imagine that trout would bother swimming up such a small spring fed stream, but they do.

The lesson learned in this scenario is that small spring creeks play an important role in the eco-system of any trout stream and they should be protected and in some cases enhanced. The true test will be in how we protect and maintain both Millennium Creek and Ranch House Spring Creek into the future. With the impacts of human activity in and around both streams, there are certain maintenance requirements that need to be dealt with into the future.

Bow Valley Habitat Development and its partners, including volunteers, will continue to maintain these streams for as long as we can. What will happen to both Millennium Creek and Ranch House Spring Creek in the future is anyone's guess, but for the time being, they will continue to be protected. Hopefully, the resident trout will also continue to thrive.



Above: This is a photo of Ranch House Spring Creek, taken in 2009.
Below: Millennium Creek in 2008, on the lower end of the stream.



Planting Native Willows and Trees - For Riparian Restoration

The "Bow Valley Riparian Recovery and Enhancement Program" involves planting both native willows and trees. Most of the articles and photos in this magazine are showing the main crop of native plants, which are Salix willows. However, the planting of both Aspen and Balsam poplar is carried out along the streams in the program. These plants don't get much coverage, but I am hoping to change that.

We try to mix in some tree plants with the willows each season, so along the creeks there are poplars growing. The main problem with getting trees started along the streams are the rodents that love to eat the new poplar growth when the plants are in their early stage of growth. This hazard is accepted as just being part of the planting program's annual damage, but some of these plants do survive.

When either a beaver or muskrat browses on a poplar plant, if the damage is minimal, the plant will continue to grow. Over time, the root system on the poplar will be established enough to speed up the growth rate of the young tree and it will eventually reach a noticeable height. I have monitored some of these trees to watch how they fair over time. Despite being grazed upon, some of the poplars that were planted four years earlier, are still holding on and growing.

I am hoping that the root systems will expand to a point where the new suckering will occur. At this point we may see a dramatic change in the stream bank's appearance, with larger trees establishing themselves in the landscape. With a growing willow cover along the streams, the poplars may not be singled out as much over time. Right now, the young poplars are just too attractive to the rodents that love to graze on them.

It will be interesting to see how things work out over time. On the Bighill Creek in the Town of Cochrane, Alberta, there is an ongoing beaver management program, which helps keep the populations of the rodent in balance. This definitely helps in our riparian recovery efforts. This management is an important factor in the success of riparian restoration programs. If you can keep beaver populations under control, the recovery is much faster.

Right Photo: You can see where a rodent has pruned off a limb on this poplar cutting. It was most likely a muskrat. However, you will also see that new growth has already started on the cutting this year. The branch was grazed off last year.

I like the way that poplar trees will help stabilize stream banks on creeks. The root systems travel along the stream banks and create a mesh of super strong root systems that help to retain the stream bank soil. I have seen stream banks of dense poplar root systems as high as four to five feet on some area streams. On the Bighill Creek, in areas where poplar stands are present, the root systems create great undercuts for trout cover, along the water's edge.



Above: Poplar roots in this photo are thick along the water's edge.



Submerged Wood Makes Perfect Cover For Trout

Trout relate to any type of natural submerged cover, with the most common form being woody debris. Woody debris is classified as timber, root systems, branches or limbs from trees or willows.

As an angler fishing trout streams, log jams or any submerged wood was always a good place to cast a trout fly, because trout use this type of structure for habitat. The breaking of submerged wood also provides perfect invertebrate habitat, so there is also a good supply of food for resident trout.

If the wood is submerged along the stream bank, the flow in the stream channel is constricted and this will cause scouring in the narrowing of the stream channel, creating more depth over time. Timber and brush deflectors are often used in the narrowing of the stream channel for just this purpose. Especially on lengths of stream channel that are wide and shallow, with plenty of fines or silt on the streambed.

Bow Valley Habitat Development has used a number of various designs for this application. One of the projects was on Polkeman Creek, in the Town of Canmore, Alberta. The deflectors are positioned either perpendicular to the stream, or in a repelling position directed slightly upstream.

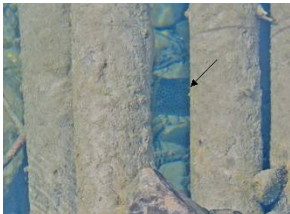
These types of fish habitat enhancement projects can be very costly, but if the design and construction is done right, they are very effective enhancement structures. BVHD has used heavy equipment to install some applications and others have been constructed using only manual labour. The key to success is proper anchoring of the deflectors into the stream bank, yet making the substructure as natural in appearance as possible.

Over the last six years, Bow Valley Habitat Development and its partners have conducted riparian planting projects, using native willows and trees, along three area streams. The long term objective is to create a natural riparian zone and enhance fish habitat by adding woody debris in the stream channel and live growth above the perimeter of the stream channel.

This program will accomplish the same objective of creating submerged wood into the creeks, at a relatively lower cost than actual in-stream fish habitat enhancement projects, and it will all be quite natural in appearance and its long term effectiveness for creating fish habitat in the streams. However, the process of meeting our goal will take time. All of the native trees and willows will take years to mature, before the objectives are realized.



Above: This is a photo of one of the deflectors that Bow Valley Habitat Development installed on Polkeman Creek, in the Town of Canmore, Alberta. The project had been completed a few years before this photo was taken.



Above: This close up photo of one of the deflectors on Polkeman Creek, shows a brown trout holding just beneath the cover of the logs that were installed along the stream bank.

Floods Create More Submerged Woody Debris and New Growth

During a significant flood event on a trout stream, large amounts of woody debris is introduced into a stream channel. Entire trees and willows are wash free of stream banks and other dead limbs and logs on low lying areas along the stream, end up in the flow. All of this new woody debris will create great submerged fish and invertebrate habitat somewhere downstream, after the flood waters subside.

I have come across large log jams on some streams, just after a major flood event. The jams are perfect habitats to find lots of trout utilizing a cover of logs, both floating and submerged. The problem for a fly fisher, is that most of the trout may be too far under the wood to present a fly to them. However, just knowing that the new habitat will support many more trout in the stream, is satisfying enough to me.

After the big flood event of 2013, many local trout waters were reshaped and new pool habitats and woody debris held promise of a great future for the fishery, but it would take a few years. This past two years, the signs of a recovery in the trout populations are very encouraging.

Another positive result of the recent flood event on the Bow River watershed is the signs of new growth. Just after the flood, a number of new gravel bars on a number of area trout streams, started showing new willow and poplar growth.

Streams like the Bow River and the Jumpingground Creek have new generations of willows and cottonwoods sprouting up from the new gravel bars. This regeneration only occurs after major flood events, so it will be good news for the riparian zones along these streams.

Streams like the Bow River and Lasandra Salix are the first to appear, but over time, other varieties will root on the new sand and gravel bars. For streams like the Bow River, this new riparian growth is critical to the fishery and other wildlife along the stream.

The flooding of the Bow River watershed can be very damaging to human development along the low lying watershed, but the benefits to the natural ecosystem are just part of the cycle of life for our flowing waters. The importance of a healthy riparian zone along all of our streams is good for both fish and people. This is important to know.



Above: This poplar plant was planted in 2014 and has managed to survive to this year. Over time the plant will start to sucker along the water's edge and foster new poplar trees along the Bighill Creek. This tree and others will complement our riparian recovery planting program over time, and add to the riparian zone along the creek.

"Other Tree Planters Active in Local Communities"

It is important to note that there are other tree planting groups, including *Muskrat Stew*, that are annually planting trees along the margins of our flow streams. The Cities of Calgary, Airside and the Town of Cochrane parks departments all have been actively planting thousands of trees every year.

NGO groups, such as Cochrane's Branches and Banks have planted thousands of trees over the past decade on Bighill Creek, in Cochrane. The native poplar and aspen trees will spread over future years and help create the natural riparian zone that we are looking forward to seeing in the future.

There is a trend in volunteer tree planting these days that I really like to see. Having the opportunity to contribute towards doing something beneficial to the environment is the key. The environmental reserve land along our flowing streams is the perfect environment for tree planters and in our area there are plenty of streams flowing thru the communities that could use the enhancement work.

With all of the combined efforts, I expect to see some major changes in the landscape along area creeks in the coming decades.

Over Hanging Willow Cover

Most of the native willow and tree planting in the "Bow Valley Riparian Recovery and Enhancement Program", on some local streams, is done along the water's edge.

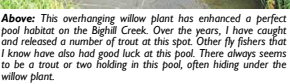
Over time, these plants will grow out and over the stream channel providing perfect natural habitat for resident trout populations. The stability of the root systems will also help maintain the stream channel, keeping it narrow and deep.

In years of fly fishing, I know that willows hanging over the streams surface are great places to catch trout, so the more cover that is created by our planting program, the better for trout populations in the creeks.

The over hanging willow plants also help to constrict the flow in the channel with deep pool habitats or runs some local streams, is resulting from a confined passage of flow. During high flow events in the stream, this scouring of the stream bed is further enhanced.

All of this can be the result of planting even a single willow or tree plant. This makes the approach of riparian enhancement a very cost effective method of creating fish habitat. The primary benefit is that it is all natural, with no sign of human involvement.

Over time, our riparian recovery work will create more over hanging willow and tree cover.



Above: This overhanging willow plant has enhanced a perfect pool habitat on the Bighill Creek. Over the years, I have caught and released a number of trout at this pool. This over hanging willow that I know how also had good luck at this pool. There always seems to be a trout or two holding in this pool, often hiding under the willow plant.

Stream Tender Magazine

June Issue — 2017

Bow Valley Riparian Recovery and Enhancement Program - April Inspection Tour

In April, I visited all three streams in the riparian recovery program, just to check out how native plants from previous plantings are fairing along the streams. Bighill Creek is right next to where I live, so it usually gets the most attention. My main interest was in how last year's crop of plants was doing, so this was my main focus of the inspection tour.

Early spring is a good time to conduct inspections on plantings that were completed during the previous season. At this time of the year, the winter snow has flattened the shoreline grasses and sedge, which exposes the young new willows and trees. It was nice to see good survival on some reaches of the streams, with plants from years earlier showing well along the stream banks.

On many areas of West Nose Creek, there were signs of beaver grazing, but most of the plants that had provided forage for the beavers will survive just fine. The beavers don't usually both with the young plants, but prefer the ones that are in their second or great year of growth. By this time, the root systems on these plants is well established and the willows will survive just fine.

The limited forage on West Nose Creek, for beavers, causes heavy grazing on plants that we have planted. This is just part of what is expected on the creek and over time the number of plants will be sufficient to maintain a balanced riparian zone, regardless of the beavers.

This year marks the fourth year of the Bow Valley Riparian Recovery and Enhancement Program. Bow Valley Habitat Development would like to thank all of the partners and volunteers that have made this riparian recovery program possible. We are making a real difference along the stream banks of Nose Creek, West Nose Creek and the Bighill Creek. Our native willow and tree plants are transforming these streams into healthy eco-systems where trout and wildlife will thrive. We are also improving the water quality in the watershed.



Above: Willow plants from the 2014 and 2015 planting on Bighill Creek, stand out in the landscape. Last year, additional willows and trees were planted in areas along the stream bank in this same reach.



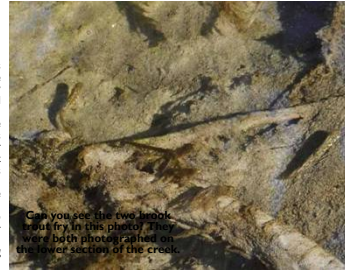
Above: This photo shows willow plants from last year's planting on Nose Creek, in the City of Airdrie, Alberta. The new willows have long shoots that have buds and these will be covered with new leaves by early May. This reach is presently void of any willow or tree growth. The additional cover of willows will make quite a difference in the appearance of the stream, in approximately 5 or 6 years from the planting.

Lower Millennium Creek Trout Hatch

Brook trout have been spawning habitat is providing spawning on the lower end of successful reproduction.

Millennium Creek since the On May 21st of this restoration program was spring I managed to take completed in 2008. A key some photos of the new spawning habitat was created hatched brook trout. They all on the bottom end of the appeared to be quite light in stream as part of the fish color and this could be habitat enhancement related to the shade on this program and trout have been reach of the creek, or utilizing the spawning beds possibly the amount of site since then.

This spring was the first during hatch times. time that I have been able to What over the cause, the confirm a successful tiny trout are very unique in color, when compared to the lower spawning habitat in those that hatch further nine years of monitoring the upstream. It was great to find trout hatches on the creek, out that our spawning Finally, we know that the key habitats are all working.



Above: Can you see the two brook trout fry in this photo? They are in the lower section of the creek.

Nose Creek Riparian Planting Program Finishes Off With Student Volunteers



On May 25th, 2017, a group of student volunteers help finish off the 2017 riparian planting program on Nose Creek planting site, in Airdrie. The group was from nearby CVW Ferry Middle School, so the planting site will most likely be revisited over time to see the transformation of how the new plants create a healthy riparian habitat.

Despite the early morning chill and threat of rain, the students worked hard to get the job done. The group planted 200 native plants in a few hours along approximately 200 metres of stream channel. The new plants will bring life to this barren reach of the Nose Creek and it will be a perfect show case site for the nearby school, over time.

We thank staff from the City of Airdrie for helping out with the planting program. There were four adults on hand to help instruct the young team on how to plant the native willows close to the water's edge. Recent rains helped out by making the ground soft for the planting.

West Nose Creek Bank Stabilization Sites

In 2017, during our riparian planting program, we will be planting willows and trees to slow down on an area of West Nose Creek that the erosion process on this reach has a lot of meanders in the stream of the West Nose Creek. Without channel. The result of a larger number of oxbows and bends in the stream channel, is that there are more erosion sites on the outside especially during high flow events bends of the stream.

By the end of the planting season, the shallow root systems of a number of these erosion sites will be planted with native willows and to keep the top soil in place. trees, so over time this will reduce the amount of silt loading into the stream channel. This part of the riparian planting program has the sod and causes it to collapse worked well in recent years, so I look forward to stabilizing more of these erosion sites.

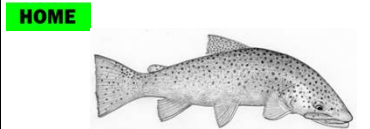
Presently, there is no native willows and trees to slow down the erosion process on this reach of the West Nose Creek. Without the more stable root systems from mature willows and trees, the soil is vulnerable to water erosion, especially during high flow events on the stream. The shallow root systems of native grasses is not strong enough to keep the top soil in place. Although it does help to some degree. On some outside bends in the channel, the erosion undercuts the channel, the erosion undercuts the sod and causes it to collapse into the creek. When this happens, large volumes of soil get washed into the streambed.



Above: This eroding stream bank on West Nose Creek is actively in a state of collapse. Water eroding the base or toe of the outside stream bank is causing the stream bank failure.



Above: This is another example of an eroding stream bank on West Nose Creek.



Above: The group poses for a photo with one of the new plants in the foreground. It will take a few years before the new plants stand out in the landscape, but eventually, the stream's channel will become a much more natural eco-system for both fish and wildlife that use the creek as a wildlife corridor.



Above: These willows were planted along West Nose Creek in 2014 and 2015, but the growth has been slow and some beaver grazing has occurred at the site. However, the crop is now well established and over time they will grow to maturity.



Above: This photo shows some of last year's willow plants along a reach of West Nose Creek, in Calgary. This batch of plants will provide excellent overhead cover for the resident brown trout population. The stream channel is deep right below the stream bank, so a little extra shade will make great habitat for trout.

2017 Upper Spring Creek Trout Hatch—Significant

In the fall of 2016, there was a record spawning event on the Upper Spring Creek, which is a tributary to the Bighill Creek. Seeing a successful incubation and hatch of a new generation of brook trout resulting from the 2016 spawn was great to witness this spring.

The Upper Spring Creek spawning activity will have the greatest influence of the future success of the recovery on Bighill Creek's trout fishery. Having recruitment of new year class trout further up the system is the best way of re-populating the creek with brook trout. This is starting to happen with this year's hatch.

It is my hope that, eventually, we will see brown trout also spawn in this important spring fed creek in the future. The spawning habitat is already available for larger trout, so I suspect that it is just a matter of time before this happens. When the brown trout migrate to the upper reaches of the creek in time, they will have a perfect tributary to the Bighill Creek to spawn in.

During last fall's spawning event on the Upper Spring Creek there was a total of 42 brook trout redd's mapped and documented by BVHD. It is expected that this number will increase in the future.

