



Kettle Creek Watershed Association

June 2018 Newsletter



Kettle Column - Birding

Todd Roberts

If there's one thing I know, spending a weekend in the Kettle Creek Valley is never wasted. The weather may not be great. The trout may not be cooperative. Deer, turkey or bear may not be easily found. But the trip is never wasted.

My family and I went to camp on May 18, after a wet week. We didn't expect to spend much time fishing; the water was high, and more rain was in the forecast. We figured it would be a quiet and relaxing weekend at camp. My brother and his family were joining us, so it

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looked like a good weekend to catch up with each other as well as eat and drink too much.

The terrible weather forecast didn't disappoint. It rained on the 18th, and most of the morning on the 19th. Despite promising to sit and relax all weekend, we got stir crazy and decided to go for a ride and perform a stream survey. Now, I figured the best I would do was find out how many Dogwoods were blooming between Camp and the Fly Project. I think all of them were in full bloom that weekend and the contrast between the fresh yellow green, and wisps of mist from all the rain made the white blooms with their rose tips pop out. The other noticeable item we discussed while driving up the Valley was that we should have an amazing acorn year. The little tassels that hang from an oak tree this time of year are catkins. Oaks self-pollinate and these are the blooms that release pollen. The female side, which produces that acorn, is smaller, less conspicuous and reddish. The number of catkins makes me imagine that this year will be a bumper crop.



Dogwood flower
Photo by Sarah Roberts

When we made it to the top of the Valley, a mile or so from Ole Bull, we decided to head back down the Valley and perhaps find the Elk. We drove the entire Valley, saw a few Elk and enjoyed the sights. I wanted to go to Bush Dam. I always enjoy stopping at the Dam. Yellow Warblers, Canadian Geese, Common Mergansers, Mallards, Green Herons and Great Blue Herons are pretty common sights. I can always count on a strong Tree Swallow population as well. Each year I look forward to the return of the Bald Eagle couple and ask anyone who'll talk to me where the nest is. In early spring the marsh and swamp behind the "Channel" emptying into the Dam is a good place to look for Black Bears.



Photos by Sarah Roberts

When we got to the Dam, we first noticed tents. Sporadically placed around the yard in front of the boat launch. Our first thought was that there was a family picnic, or reunion, and the rain and wind came to visit as well. But we soon noticed the number of green DCNR uniforms. We had unexpectedly found and arrived at The Kettle Creek Birding Festival.



The Kettle Creek Birding Festival occurs every year. Get in touch with the DCNR Kettle Creek website (kettlecreeksp@pa.gov) to find out exactly when it occurs. This year our park offered interactive learning opportunities for the kids, an opportunity to build your own blue bird box courtesy of our DCNR, and a falconry exhibit and presentation from Baywings Falconry. Baywings Falconry brought a fantastic assortment of birds of prey including a Harris Hawk, American Kestrel, Peregrine Falcon, Barn Owl and a European Eagle Owl. Presentations were done to increase awareness and educate all of us on what these amazing birds need to survive and thrive, including what we can do to help them. I love birds of prey, and especially appreciate owls, so this was really enjoyable.



Another tent was set up as an educational booth for kids, to answer questions about plants, animals and trees in Pennsylvania and learn more about our environment.

We made our way down to the boat launch and met Ian and Kim. Both DCNR agents. Ian from Kettle Creek and Kim on loan from Sinnemahoning. Kim was kind enough to have brought her pontoon boat over and hosted free rides around the lake. Now I'm 51, and I started to come to Kettle Creek Valley when I was about 9. But our family isn't nautically inclined, and boating has never factored in my life. This was an incredibly unique and different view of the lake! 18 people got on the pontoon boat and backed away from the dock and began a tour of the lake that was unique because it gave a completely different view and perspective. While motoring down the far side, we saw Grackles, Yellow Warblers, Sandpipers, Bald Eagles, Green Herons and a special guest appearance of a mink. The little mink really stole the show and was an unexpected addition. When we got to the breast of Bush Dam, we received a background review of the dam's construction (completed in 1962) and the importance of Bush Dam to Harrisburg and Baltimore. Without our Dam, and its sister dam's, these cities and their population would have sustained massive damage and flooding.

My favorite part of the boat tour was the additional information the Rangers passed on. I recommend you check out the eBird app to track the birds you see.



Budburst.com to track the budding out and blooming of plants and trees from year to year and join PARS which is the Pennsylvania Amphibian and Reptile Survey. These are great free sites which will allow anyone to track when they see wildlife and track the plants and flowers that bloom in Pennsylvania. The tour was fantastic, relaxing and a genuine pleasure for anyone that enjoys the outdoors. Just as a teaser? Find out what a murder of crows are, or a parliament of owls. I found out that yellow iris are invasive. But the purple iris is native. And the next time you stroll around the lake and look at all the plants remember what Kim taught me. "Sedges have edges, and reeds are all round, but grasses have joints in states where allowed." I'll never look at plants the same way again!



Photo by Kelsey Mehora

When we arrived back at the dock, my daughter and nephew made a bluebird box with the help of a DCNR officer and a wonderful volunteer from the Kettle Creek Sportsman Association. And just to top of the afternoon the entire crowd

saw two black bears in the marsh across from the boat launch. A sow with three cubs was sighted before we arrived, we never saw her. Canada Geese and a Kingbird rounded out the trip.

Kettle Creek Valley is so much more than a trout stream. The Valley is so much more than the hunting opportunities it offers. The next time you arrive, even if the weather is perfect and the trout are rising to dry flies; even if the turkey are sounding off; even if the squirrels are everywhere collecting acorns and cutting; even if the small mouth and rock bass are on fire; stop by the park office and find out what's on the agenda. Because no matter what, a trip to Kettle Creek Valley is never wasted.

For more information check out:

www.paherpsurvey.org

eBird (Cornell University)

Budburst.org



Project Healing Waters – Event *Gary Rihn*

Beautiful weather, scenery and stream conditions met a group of military veteran fly fishers at the 3rd Annual Project Healing Waters Fly Fishing outing on Kettle Creek at Cross Fork, PA, May 4-6, 2018.



The weekend began with a streamside casting session, as fly fishers from Altoona, Erie and Pittsburgh PHWFF chapters arrived on Friday afternoon. Once everybody was assembled, they participated in a Patriot Parade from nearby Renovo to the event location in Cross Fork. The parade was led by fire trucks from the Kettle Creek Hose Company fire station, complete with lights and sirens. The procession was also accompanied by a group of bikers with the Altoona Chapter of the PA Combat Vets motorcycle club. “I’d never been in a parade, let alone one exclusively for veterans. People came out of the woodwork to watch and thank us as we

went by”, commented “Tiger Mike” Larkins, a US Marine who served in Viet Nam. Barry Federov added, “People around here are real patriots. I can’t believe I got a parade. These people really get it”.

Following a catered dinner at the fire station, the veterans retreated to the nearby Kettle Creek Adventures Lodge for the night, their accommodations for the weekend.

Early on Saturday morning, after a hearty breakfast, everybody met at the stream to be assigned mentors. The mentors offered advice on locations, fly selections, and other fishing techniques, as well as assisting the veterans with duties such as netting fish when the veterans were successful. According to Jim Toth, with the Kettle Creek Watershed Association, “The mentors are out there netting, teaching, encouraging, and cheering on the vets. They all dedicate a weekend to be here, and ask to come back year after year”.

The action began quickly, with some of the veterans landing, and releasing, trout within minutes of stepping into the stream. They continued to catch rainbow, brook, brown, and one very remarkable tiger trout until retiring for the day.



After a bit of rest at the lodge, they returned to the fire station for the Kettle Creek Watershed Association banquet, where they again had a great dinner along with sharing stories and participating in raffles that benefitted KCWA in their mission of local stream improvements. One of the highlights of the evening was drawing the winning raffle ticket for a patriot-themed presentation fly custom tied by Tom Herr, who spends as much as 15 hours tying one single fly. While he donated the fly for the benefit of the veterans, he also expressed, “Veterans may not realize how much we gain from you. I give my sincere thanks to all of you for allowing me to spend my day with you”. Tim Bowersox also presented personally tied red, white and blue ornamental fly pins, to each veteran to be worn on their hats or fishing vests.



Other support was provided by Lively Legz, who graciously presented fully stocked fly boxes, packed with flies appropriate for the weekend, to all of the

veterans for their use at the outing. Mike Saxton, founder of Lively Legz, said “I think Project Healing Waters gives veterans a chance to bond together, to talk, and to know that others are experiencing similar struggles. Seeing the veterans enjoying themselves makes us look forward to coming back year after year”. Flies, fly boxes, and other gear was also generously provided by Holsinger’s Fly Shop, Kettle Creek Tackle Shop, and Wet Fly Waterguides to each of the veterans.



All of the veterans, regardless of experience, caught multiple fish. One of the fly fishers actually caught trout on wet, dry, nymphs, and streamer flies, on what turned out to be her first fly fishing outing. Mentors got a lot of credit for guiding the veterans to success throughout the weekend. John Sodergren, an Army veteran, remarked “I’m really impressed with the mentors, they have to be really patient with some of us. I enjoyed just sitting streamside talking with them. They really want to be here with us, and I thank them for that”.



Besides the mentors, locals turned out in droves to watch and cheer on the veterans. The “Bridge Brigade”, a revolving group of locals, had a particularly good vantage point, directly above some of the fly fishers in the stream below. Their alternating cheers on a good hookup, and groans on a missed opportunity, kept the fly fishers entertained throughout the weekend.



Photo by Doug Roberts

Two of those locals who came out to volunteer were Bob Davis and Dave McIntyre, both Viet Nam veterans. Davis commented, “This weekend hurts when I think back, but it’s also healing to me, even though I’m not fishing. I have the feeling that somebody is beside me, and that’s healing for both sides”. Regarding the Project Healing Waters organization, McIntyre expressed, “How this group got created is the greatest thing going. We want to do all that we can to help”. Davis added, “I’d like to see the Project Healing Waters guys come back here every week”.

For some veterans, it was an opportunity to bond as father and son. Vern Dolby, in

talking about his son Ben, said “In Ben’s younger years, he was rebellious and spent all of his time with friends; we missed out on a lot of time together. Now that we are both in this group, I get to be a part of his life again”. Ben Dolby added, “The outdoors was always part of my upbringing, then life happens. Now that I’m retired we have time to spend together fishing again”.

Along with assisting physically disabled veterans get back out on the streams, a large part of the Project Healing Waters mission is to help veterans with the sometimes hard-to-see symptoms of Post Traumatic Stress Disorder. One of the participating fly fishers, Tiger Mike Larkins expressed “I have to live with PTSD because fear was embedded in me in the jungles of Viet Nam. Now, Project Healing Waters has taken this veteran under your wings. You have given me the greatest thing in my life”. To his mentor, he added, “You never leave my side. You hover over me like an angel”.

Jim Toth summed it up by saying, “Project Healing Waters is a simple concept actually; you take somebody fly fishing. It heals veterans; it gets them talking, and that’s important. It heals veterans, it heals volunteers, it heals brothers”

To see the event video, click [HERE](#).



Aquatic Invasive Species

Mike Klimkos

It has been a slow evening of fishing. Maybe you were on Spring Creek in Centre County or on the upper stretches of Pine Creek near the Potter-Tioga County line. Your buddies return to the car, and they have had the same luck as you. It looks as though your long weekend of fishing is going to be a bust. One of the members has been checking his phone. He has a message from a friend, "Kettle Creek is on fire now. Fish rising everywhere. Get here!!" He mentions it to the group and plans change quickly. Tomorrow you will hit Kettle Creek. But are there more than just the four of you heading to Kettle Creek. If you have been fishing in waters infested with either didymo (*Didymosphenia geminata*) a very large (>100 microns), single-celled, 'coke-bottle' shaped alga known as a diatom, or New Zealand Mudsnails (*Potamopyrgus antipodarum*) a right coiling snail that is usually 4 to 6 mm in length, you may be taking unwanted critters to the creek.

Before you put your gear away, clean it! Brush off all the mud and debris that is visible. Hot water and strong detergent washing is recommended followed by thorough drying and/or freezing. But



@KCWatershed

The KCWA is now on Facebook! In order to maintain a closer relationship with members and keep all of those that support us up to date with the latest information, we have decided to create a Facebook Page. This page will have regular posts regarding upcoming projects and improvement activities as well as updates on recreational activities in the valley (i.e. hiking, fishing, snowmobiling, etc).



New Zealand Mud Snail, photo USGS



along a stream you may not have access to hot water or a deep freeze. What's a conscientious angler to do? If you are going to be fishing in various watersheds at a minimum take along a bucket, a soft brush and some Dawn dish detergent. Thoroughly scrub your waders and boots. Pay careful attention to the soles. That small little pebble that is as long as two tippet rings laid side by side may be a mudsnail. You may not even see didymo.



Didymo aka Rock Snot, photo by Tim Daley, PA DEP

Some older recommendations call for solutions of chlorine bleach. If you are going to go that route, test it to make sure it does not harm your gear. Waders

with pinholes caused by bleach can be unpleasant to wear. There are commercial products on the market designed specifically for cleaning gear. Don't forget your flyline. Clean it before stowing. The dish liquid can remove most of the grime and hopefully rid it of any attached didymo cells. If you have encountered didymo and it has slimed your flies, put them in a separate container away from your other flies. Resolve not to use them on the next stop of your trip. You can steam them after you get home. Clean your gear as best you can before leaving for your next destination.

The [USDA recommends the following](#):

CHECK all recreational gear and clothing that has come in contact with water for any visible

signs of sand, mud, or plant fragments which may indicate a tiny hitchhiker.

CLEAN all gear before leaving a site by scrubbing with a brush and rinsing with water.

DRAIN: all of the water from your boat (including the bilge, live well, motor), trailer, tackle

and gear before leaving the area.

DISINFECT your gear (especially waders and boots) before traveling to a different water body. Freeze your gear for a



minimum of 6 hours (< 26°F), soak gear in a hot water bath for 5 minutes ($\geq 120^\circ\text{F}$) (not recommended for Gortex), or soak gear in undiluted Formula 409 for at least 10 minutes.

DRY your gear completely (at least 48 hours) after each use.

NEVER transport live fish or any other aquatic plant or animal from one water body to another – it is illegal!

Most other AIS removal guidelines are along similar lines.

Of course, an alternative is to have a completely separate set of gear that has been cleaned, sanitized and stored away from your wet gear. The cost may be a bit much but think of all the friends you will make in the shops where you buy your waders, vests, lines and flies.

KCWA Meetings and Sponsored Events

KCWA Board Meeting
Sept. 2, 2018 @ 9:30
Cross Fork Fire Hall

Acid Mine Drainage

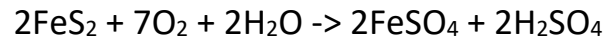
Mike Klimkos

What is Acid Mine Drainage? The answer is pretty simple and pretty complex. The simple answer is Acid Mine Drainage (AMD) is any water that comes from a mine with a pH less than 7. Now for more complexity. When rocks are disturbed and broken through the mining process an iron disulfide mineral – pyrite (FeS_2) is exposed to air and water. The pyrite is reactive in the presence oxygen and water.

Pyrite + Air + Water \rightarrow Acid Mine Drainage



Technically this reaction is written as



That's the basic reaction, and without getting a whole lot more complicated, nor talking about secondary reactions, ferrous and ferric iron, bacteria and other things, that's really the bottom line. It is important to note though, that once AMD production has begun it begins secondary, self-perpetuating reactions that produce more AMD. You may remember from high school chemistry class what H_2SO_4 is. To refresh your memory it is sulfuric acid, the same stuff used in your car battery.

But not all rocks contain pyrite or other sulfide minerals, and some rocks are actually alkaline, limestone for example.

Now we start getting technical. When coal was formed back before there was television, video games and NASCAR, vast quantities of carbon bearing plant material were deposited where they grew. Over these layers of ferns, mosses and the lichen (sorry just a little play on words and a poor one at that), minerals of various kinds were deposited. Depending on the environment these minerals were dropped in determined the quality of the strata over the compressed plants that would eventually become coal. Some areas that became inundated by the ocean were covered by deposits of limestone. Some river bottoms had large quantities of sand and silt. Brackish environments full of mud received mineral deposits near where freshwater met the oceans. The sandstone and shale piled up quite rapidly (geologically speaking) and their intense downward pressure caused the plant matter beneath it to become coal.

When limestone or a carbonate shale was deposited over the organic matter the strata over what was to become coal became alkaline, that is the pH was above 7 and the rocks gained what is now called neutralizing potential (NP). Even if pyrite is in some of the rock layers, the NP has the ability to neutralize the acid production. The discharge from a mine may actually have a pH near 7, that is to say neutral. However, pH alone is not the best indicator of the severity of AMD. Acidity is the total base requirement for neutralization of a solution. A laboratory test for acidity will measure it in milligrams per liter (mg/L).

When acid is generated metals become soluble. The three primary metals in AMD are iron (Fe), Manganese (Mn) and aluminum (Al). As long as the pH remains low enough the metals will stay in solution. There are times and places where AMD is generating so fast that stream water may appear to be gin clear. An example of this can be seen at the bridge



over Cooks Run just above Crowley Run about a mile upstream from the West Branch of the Susquehanna River. It looks like it should be a wonderful trout stream at that point (and it was), but if you fish it your hooks will rust and you will not catch a trout. The pH is about 4.0 and the acidity is in the thousands. When AMD meets clean water the pH will rise and the metals will precipitate out of the solution. This causes the red-orange-yellow deposits on the stream bottom often referred to as “yellow boy.” Manganese will precipitate out as a black deposit and aluminum will have a white to light gray appearance. The metals precipitate at different pHs and streaking may be visible where a discharge enters a stream.

The effects of pH, acidity and metals on living creatures is complex. Brook trout can survive low pH water (to about 5.3) provided metals are not present. It is the addition of metals that change the picture. Aluminum is toxic at relatively low levels at low pH to most aquatic organisms. Iron may smother the streambed destroying habitat, and manganese will impart objectionable tastes and odor to water and cause staining.



I have been involved with AMD remediation in western Clinton County since the mid-1970s. In fact, it was the AMD pollution of my home water – Cooks Run – that led to my career path. Some things I have learned are:

- Western Clinton County streams are poorly buffered and generally have a natural pH of around 5.5. Undisturbed they contain few metals.
- The streams when hit with a slug of acid do not have the ability to incorporate it and still remain viable environments for invertebrates and fish.
- Western Clinton County is a terrible place to mine coal and/or clay. My colleagues and I have often joked (but not been too far from the truth) when we said if a person plowed a garden too deep they were likely to cause AMD.
- The coal is not metallurgical quality, and with its high sulfur and ash content and low BTU value the steam coal market (now in a depressed state because of cheaper and plentiful natural gas) will not be a viable resource to someone looking to mine it for profit.
- Modern mining and reclamation techniques (even without the addition of alkaline material) often reduces AMD loading.



- With the incorporation of alkaline material there has not been a site anywhere in Pennsylvania that has not improved. Some sites have not improved as much as could be hoped for but they have improved and not gotten worse.
- Groundwater moves at a very slow pace. Reclamation of a site will not provide instant results.
- Having been involved with passive treatment since its early days (sphagnum bogs and cattail marshes) and watching it progress through time, it is important to note that all treatment systems, be they active or passive, require maintenance, and without maintenance they will fail.
- If a permanent fix can be found and effected now, it is better than kicking the can down the road to deal with a problem that had only had a twenty-year fix. The money to fix the problem two decades from now might very well not be there.
- Under the provisions of the Clean Streams Law the surface landowner is ultimately responsible for any pollution discharge from their property. In large portions of western Clinton County that means that if the Commonwealth of Pennsylvania is the landowner and therefore is ultimately responsible for the discharge to the waters of the commonwealth – also owned by the state.
- There is money available for reclamation of abandoned mines.
- The Bureau of Abandoned Mine Reclamation has inventoried the entire state and categorized sites into three categories; Priority 1 – Danger to Life, Priority 2 – Danger to Property, Priority 3 – Pollution.
- Very recent research into the chemistry of AMD has found that some rare earth elements are present in some discharges. Whether or not this becomes a viable source of funding for AMD treatment remains to be seen. At the present time I would not bet on it.

It is easy to point a finger and cluck your tongue and say that site should have never been mined. But in 1918 if you were waiting for a train in Renovo to take you to Williamsport, you probably would not have cared where the coal was mined. Likewise, in 1943 if you were building tanks to defeat Hitler you probably would not have cared where the coal was mined as long as you had it to make steel. In the 1960s you expected the television to come on when you turned the knob. You expected the electricity to be there and more than likely coal was the source of the electricity.



Modern mining and reclamation techniques are vastly better than the techniques used in years past. Sometimes simply re-mining a site to go through it again to remove coal that was left, or mine a deeper seam and reclaiming it with current methods has shown improvement in water quality by simply reducing the amount of water flowing through the site



Techniques have improved to analyze rock strata over the coal to determine how much alkaline material (NP) is needed to neutralize any acid that may be produced. In 1998, Smith and Brady suggested a minimum of 500 tons per acre of alkaline material would neutralize AMD or prevent it from forming in a backfilled mine site. The amount seemed to jump rapidly to 1000 tons per acre. As this is written, the contractor reclaiming the Camp Run site west of the Kettle Creek watershed is applying 3000 to 4000 tons per acre, based on the amount of acidity generated in the backfilled surface mine.



AMD is a pernicious problem. It will not go away anytime soon on its own. A few coal refuse piles have been sampled for nearly 100 years and the AMD remains unchanged. We do not know the time of the endpoint of the reactions. In order to restore the water quality of the lower Kettle Creek watershed drastic intervention will be necessary. The landowner is not in favor of temporary, maintenance intensive short-term solutions. The funding agency is also in favor of permanent fixes. It is ultimately up to the landowner and the funding agency to set the course. In both cases the majority of the land from which AMD emanates is owned by the Commonwealth of Pennsylvania whose care has been delegated to the Bureau of Forestry, and the funding agency is largely the Department of Environmental Protection. Progress in AMD remediation will come, but it is a journey of thousands of steps.

For more information and more detailed descriptions of AMD, its effects and how it can be remediated please see Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania, PA Department of Environmental Protection, Harrisburg, PA, 1998.



Timber Rattlesnake – a true sign of wilderness

Doug Roberts

Sometimes called canebrake or banded rattlesnake, the timber rattlesnake is the most northerly distributed venomous snake in North America. These snakes are members of the viper family, and like other North American vipers have a triangular shaped head that is wide and flat. They can be found in two distinct color phases - yellow and black, with dark bands extending dorsally down the body to the namesake rattle at the tip of the tail. These color variations act as a natural camouflage and help the snakes blend in with their surrounding.

Timber rattlesnakes feed primarily on small mammals and will also feed on small birds and insects. When it comes to hunting, these reptiles use heat sensitive pits on each side of their head to key in on prey. This is a characteristic common to all pit vipers. Timber rattlesnakes are classified as ectotherms (aka cold-blooded) which means they cannot regulate their own body heat. Due to this challenge of avoiding the cold, these rattlesnakes do something called brumating in protective places/dens. This means that they are in a hibernating-like state but may wake up periodically. In

some dens, up to 100 snakes may gather to brumate over the winter!

Timber rattlesnakes are venomous however the number of reported bites remains relatively low. The main reason for this is that they won't bite unless there is a perceived threat. If they feel that there is a threat, these snakes will shake the tip of their tail as a warning to STAY AWAY. In my opinion, the sound of their namesake rattle, is both amazing and very unnerving. Additionally timber rattlesnakes inhabit very remote places and often times rarely come in contact



Photos by Doug Roberts



with humans. They are a rare sight across the North East due to human expansion and have become a true sign of wilderness. Areas like the Kettle Creek valley as well as First Fork and Pine Creek valley's can provide opportunities to see these impressive reptiles in the wild.

Just two weekends ago, as my Dad and I were fly fishing we witnessed a large black-phase timber rattlesnake swim across the entire width of the creek and sun itself on the near bank. The fishing was fantastic that morning but I can safely assume that even if it hadn't been all that good, that this sighting would have made our morning! If you are out in the woods this summer and happen to come across a timber rattlesnake, be cautious, keep a responsible distance, and please enjoy these fascinating reptiles from a safe distance.



Above: slate drake spinner
Below: native brookie
Photos by Doug Roberts



Recap on Trout Season – Transitioning from Spring to Summer

Doug Roberts

It is hard to believe that spring has come and gone here in the Kettle Creek valley. These past few months have experienced, quite literally, the high's and low's of spring with water levels approaching 4 feet at times and falling as low as 0.8 feet all within the months of April, May, and June. This created challenging days for anglers and very much limited the major hatch activity. I like to view these difficult days on the water as an opportunity to improve as a fisherman and try to embrace the challenge (although sometime reluctantly). When one method isn't working, switch to another, and continue to adapt to the varying conditions until you find something that works. During the high water conditions, when the bug activity was at a minimum, techniques such as suspension nymphing with heavy stonefly patterns and streamer fishing with small wooly buggers seemed to produce fish. At times when the water was low a dry-dropper rig on light tippet or tight-line nymph setup always seemed to be able to bring at least a fish or two to the net.

Cont. on next page



With July right around the corner, the fishing on Kettle will begin to slow due to the warming water and decreased flow. While I always find the end of spring to be somewhat of a sad event, I also anxiously await the summer season and all that it has to offer in the Kettle Creek valley. The opportunities to go hiking, camping, and mountain biking (and much, much more) are endless and are only limited by the amount of free time you have. For the Kettle Creek Watershed Association, August and September are a busy time for project work, as stream improvement is often planned around periods of low water. The sounds of frogs and birds will be replaced with the sound of tree crickets and cicadas and for many, time on the water will shift to time in the woods.



Although we are only in the month of June, I want to take this time to thank you all for your continued support. This past year we saw a resurgence in memberships and support which is the

lifeblood of this organization. Without our members, the KCWA's mission to Enhance, Preserve, Monitor, and Protect would not be possible. After reading this article I would like to ask you, the reader, to please forward this newsletter via email or send via Facebook to someone who may be interested. Thank you for helping our organization to grow and thank you for reading.



Jack in the pulpit
Photo by Doug Roberts



KCWA Outreach Committee



Doug Roberts

Doug was born in December of 1992 and has been coming up to his camp on Kettle Creek since the spring of 1993. Being a lifelong visitor to Kettle Creek, he has developed a deep love for the watershed. Doug's background in conservation began while pursuing his bachelors in biology from the University of Pittsburgh, where he conducted research on acid-mine drainage reclamation and its effect on freshwater macroinvertebrates. He currently possesses a Masters degree in Bioengineering and works as an Engineer for a medical device company. In his free time, Doug is an avid fly fisherman, archery hunter, hiker, and runs a [YouTube channel](#) with his brother featuring their fly fishing pursuits.



Mike Klimkos

Mike Klimkos is retired from Pennsylvania's DEP where he worked in the mining programs and later ran the Dirt and Gravel Road Maintenance Program. He has authored, *A History of Trout Unlimited and the Environmental Movement: 1959 – 2000*, (2003), and compiled and edited *The Letort: A Limestone Legacy*, (2015) and *The Fires of Penn's Woods* (2017). He is the past editor of *Mid Atlantic Fly Fishing Guide* magazine. Mike is a member of the Pennsylvania Outdoor Writers Association and the Mason-Dixon Outdoor Writers Association.

When not sitting at a keyboard, Mike can be found in the woods and along the streams of Pennsylvania, which he describes in his blog: www.mjklimkos.com He writes from his home in Carlisle, Pennsylvania and is a lifelong visitor to the Kettle Creek area.