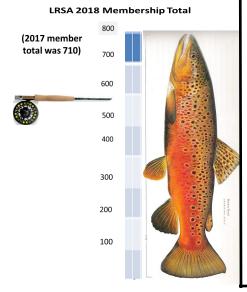


LRSA Stocking Total Since 1991: 367,600

Inside this issue:	
State of the second	
Summer Update 2018 (Cont.)	2
Rainy and Nostalgic	3
Minimzlist Fly Box & LRSA Raffle	4
Minimalist Fly Box (Cont.)	5
Minimalist (Cont.) & Environment	6
Fishing the Little J. & Hog Wild	7
Fishing Journal & Hog Wild (Cont,)	8
LRSA Overview & Lunkerfest 2018	9
Water Quality Update	10, 11
Membership Form, Board Contacts & Meeting Location Info.	12



Mike Bianchi, Lunkerfest 1st prize winner



LEHIGH RIVER STOCKING ASSOCIATION

Circulation 1,000+ Issue 71, July 2018

Lehigh River Watch Summer Update 2018:

The Lehigh River Stocking Association will begin expansion of the Gyory Co-Op nursery this summer with funding from the PAFBC and grant money from the Carbon County Community Foundation. The expansion effort includes increasing the size of the fish cage and expanding the floating dock that supports it. The Gyory Co-Op expansion will allow the LRSA to stock an additional 1,000 fish annually at an estimated cost of \$2 for each 13 inch trout.

The LRSA also made an agreement with our BC Bait Co-Op nursery to double the amount of trout that they currently raise for us; from 1,000, to 2,000 fish per stocking season. PAFBC delivered trout fingerlings for the 2019 stocking season to the BC Bait Co-Op in early June.

LRSA stocked 100 of our BC Bait Co-Op trout in the Lehigh Gorge this May to help the Five Mile High Club put more fish in this section of the river. This effort validated our ability to deliver Co-Op trout with a stocking trailer that Tom Gyory designed and built. This trial stocking went well and we pledged to support the Five Mile High Club next year with more and bigger trout.

Fish Study: LRSA modified our stocking program this year in order to study the impact that stocking has on naturalized trout populations. We skipped two of our traditional stops this spring and used the trout that we regularly stock at those locations to increase stocking in other parts of the river. In summary, we did not stock any trout at the confluence of the Pohopoco Creek and the Lehigh River or under the 476 turnpike bridge. Our original plan did not include skipping the turnpike bridge. However we realized that the bridge is very close to the Pohopoco study location and decided that we should skip the 476 bridge in order to minimize the number of stocked fish in this area. We chose to stock the fish we typically release at the 476 bridge at the Mahoning Creek confluence instead.

We intend to study the impact that this effort has on the naturalized fish population as well as the quality of fishing between the turnpike bridge and the 895 bridge in Bowmanstown. Nick Raftas with Sky Blue Outfitters volunteered to provide us with fishing reports of trout caught immediately above and below Pohopoco Creek to help us evaluate this effort. LRSA has created a shared Google Docs drive where Nick has pledged to document catch records complete with pictures of naturalized brown trout caught in the study area. LRSA plans to continue the fish study for two years provided that we receive enough credible data to provide a solid assessment of the effects that fish stocking has on naturalized trout.

Gill Lice: According to the PAFBC gill lice have been discovered in several commercial trout hatcheries across the state. This year the PAFBC required that LRSA obtain certifications for fish we stock in connection with the special events permit required for our annual fishing contest: Lunkerfest. In short, the LRSA was required -

Continued from Page 1.

to have in our possession a certification from an aquatic veterinarian stating that the fish we stocked for Lunkerfest were free of gill lice. Charlie at Big Brown was gracious enough to provide testing so that the LRSA could stock trout for this year's fishing tournament. Charlie told us that private hatcheries had not yet been notified about the new PAFBC certification requirements and he agreed to provide the testing: even though spring is the busiest time of year for hatchery owners. We are very grateful to Charlie for doing that.

I'd like to point out that LRSA was not required to obtain gill lice certifications to conduct normal stocking operations, nor were privately owned hatcheries at that time. The manner in which the new guidance was implemented had the effect of discriminating against organizations that sponsor fishing contests without in any way preventing hatcheries from stocking non-certified trout across the commonwealth and in other states. I do not believe that PAFBC intentionally sought to discourage fishing tournaments. However, the manner in which they implemented the new certification requirement nearly caused us to cancel Lunkerfest and it did cause the cancellation of other organizations' fishing events.

Steve Chuckra

LRSA Neighborhood Watch!

If you see people engaging in illegal activities in the Bowmanstown area, please contact the East Penn Township authorities at 570-386-5735. Please help us make the river a better and safer place to fish.

Sincerely, the LRSA Board



Rainy & Nostalgic - Steve Chuckra

The Lehigh River is a very soggy place this spring. As I write this article, the USGS measured flow at Lehighton is 4,170 cfs and it's pouring hard enough for me to hear the rain hitting the roof of my house. Even my dog Cammie is reluctant to leave her bed and she is usually up for anything; including making a mess of herself running through the muddy fields near my home. So, today is looking like a pretty good day to spend tying flies or writing an article for the July LRSA Newsletter. About the letter, I have assumed responsibility for publishing the quarterly LRSA newsletter and am inspired to write this morning because I'm currently not able to go out and create new fishing memories. My wife Carol is away on business travel and would have surely presented me with other alternatives. However, today I am limited only to those chores that I assign myself: which will include drinking beer and eating hamburgers at some point. But the question is "what to write about?" Do I reach back in time to recollect an old fishing story, as several are now coming to mind, or do I talk about current LRSA events, challenges, and plans.

Well, in the time it takes to hit the return key, fishing stories prevail. Not only is it more fun to think about great trips spent on the water, there will be plenty of time and need to discuss that other stuff later in this newsletter.

My uncle Tom Chuckra always liked to fish Hayes Creek not far from what is now the Mountain Laurel Golf Club near White Haven. He preferred to fish the stream after a heavy rain knowing that the high water was best for brining out big brown trout that seemed conspicuously absent when the creek flowed at its normal level. Hayes Creek is a fairly small stream and doesn't immediately come to mind when you think about nice trout, but it was a nice place to fish when the Lehigh was out of shape, like it is now. Tom had always talked about how good the fishing was after a rain storm and invited me to join him one wet day in June when I was 17 years old. That was 33 years ago and I can still remember what I wore. Or at least I think I do. Anyway, it was a warm, sticky, rainy day, and I was wanting to pit some newly acquired fly fishing skills against Tom's spinning rod and minnow rigs.

It is about a half-mile walk to the stream through state maintained grass roads and deer maintained trails. I sweated from the humidity during our walk to the creek and got really soaked as each sapling I bumped into gave me a refreshing shower of stored-up rain water. I



Actual color of Hayes Creek after a heavy rain.

remember parting company with my uncle streamside and approaching a nice hole that was just a shade darker than Yoo-hoo. I recall lots of big rocks, low branches, and high grass; and how none of that bothered my 17 year old suspension: even though I had to hunch over big time to navigate very uneven ground and grass covered rock piles between me and the creek. (A feat that I couldn't easily repeat today without some generous stretching before hand). I also remember a brand new looking fawn in that grass; that bolted away as I made my way through.

I wouldn't have seen the deer if it hadn't started because I was really water and fish obsessed then. It's not until now that I am able to enjoy the stuff that happens on the way to the stream. That's what this story is about, rain inspired appreciations of the good stuff that I didn't think about 33 years ago. You are probably waiting for me to say something about the fishing. I don't actually remember it all that well, other than Tom had a good day!

My uncle caught 6 or 7 brownies between a foot and 16 inches, in addition to missing and loosing a few in the process: including one unseen fish, that we'd have to guess was about 19 inches. For myself, I only remember catching one trout and it wasn't much of a fish by a ruler's standards, but I was lucky to catch it in the muddy water because I was fitted-out with a floating 6 weight line and some personally tied flies that were destined to ride way too high in the silty water to be noticed by anything but me. Ideas of how to effectively fish flies in those conditions wouldn't occur to me for a few more decades. Even after I acquired that knowledge, I would have been hard pressed to match my uncle's performance that day in 85.

A Minimalist Fly Box - John Mosovsky

The number of fly boxes and patterns I've accumulated over the years has grown unmanageable. Every year before the season starts I try to simplify and reduce the number of flies that I plan to use. This year I looked at 9 fly boxes, a vest, sling pack, and chest pack and reduced them down to one fly box and the vest. I'm feeling quite liberated with the results but the jury is still out on how it's going to affect my fishing experience.

I consider two schools of thought when it comes to fly selection. One school focuses on fly imitation, bug knowledge, and hatch charts. The other focuses on GISS flies, i.e. General Impression Size and Shape patterns that have some imitative features but are more suggestive of the food trout eat. GISS patterns mimic the most common and vulnerable food sources that trout are conditioned and attracted to.

The minimalist fly box (mfb) that I assembled is the key to my simplifying results. It only contains 12 GISS patterns that when fished tactically and presented properly, should catch trout anywhere, anytime on the Lehigh River (and maybe on any trout stream/river in the USA). Since a GISS pattern's size is probably the most important trigger for a trout's feeding response, all but two of the 12 patterns in the mfb were tied on different size hooks. That said, the minimum number of flies in the box comes to 30. Here's a list of the 12 patterns:

1. Plume tip – Jeremy Lucas dry fly pattern representing a generic olive mayfly. Designed for low, clear, calm water. Size #16, 18, 20, & 22. https://sunrayflyfish.com/blogs/news/the-plume-tip-the-ultimate-refinement-by-jeremy-lucas Jeremy Lucas (JL) is a European/World Champion competitive fly fisherman.

2. Quill plume tip – JL pattern similar to plume tip but includes segmented abdomen and tails, #18 & 20.

3. Caddis – JL pattern, #18 Cul de Canard (CDC) only; #16 CDC + deer hair.

4. Plume tip midge – JL pattern minimally simple with & without pearl mylar body, #20 & 22.

5. Goober midge – Kelly Galloup pattern representing a cluster of midges, #18. https:// www.youtube.com/watch?v=UmM5H2xPR3s





LRSA Raffle Winners

The spring raffle winners are displayed in the photo to the left. Drawing order runs from top left to bottom right. Thank you very much for your support! (For a closer look, please visit the LRSA facebook page.)



Page 4

A Minimalist Fly Box - Continued

6. Oppo (polypropylene paradun) – JL pattern for windy days and broken water. Can be used alone as a searching pattern or in a dry/dropper combination, #16, 18, & 20. http://flyfishing-and-flytying.co.uk/articles/ view/the_oppo/

7. Pheasant tail & partridge – Yvon Chouinard soft hackle pattern. Chouinard fished only this pattern for an entire year. With and w/o bead, #16 & 18. http://www.flyfisherman.com/fly-tying/yvon-chouinard-lessons-from-a-simple-fly/

8. Killer Bug – Frank Sawyer pattern representing a scud or crane fly larva, #14 & 16. http://www.tenkarabum.com/killer-bug.html

9. Perdigon nymph – Sleek, fast sinking Spanish pattern that's simple and effective. Works well in a dry/dropper combination, #16, 18, & 20. Also zebra midge pattern #20. http://www.flytying.ro/perdigon-nymphs-simplest-way-to-tie-them/



10. Pheasant tail nymph – Frank Sawyer classic pattern, with and w/o bead and/or lead wire wraps. An added bright collar works for murky water, #14, 16, & 18. A #10 tied on a jig hook with bead and lead wire wraps is a great deep water anchor for two or three nymph rigs.

11. Olive quill nymph – JL basic mayfly nymph pattern tied with bead and lead wire wraps, #16, 18, & 20.

12. George's Killer – George Maciag's streamer pattern. Dead drifted at the terminal end with a nymph dropper. Deadly combo for Rainbows in swift water. Tied with and w/o lead wire wraps, #14. http://dubthethorax.blogspot.com/2012/12/ featured-fly-tier-george-maciag-and-his.html

I'm thinking that at least one of the 30 flies will catch trout on the water surface, water bottom, or anywhere in between, regardless of conditions, type and depth, weather and time of day or year. Deep pools, swift runs, shallow riffles, calm, low and clear to high and murky water – all these conditions are covered with just this one box of tactical flies.

Tactical flies are designed for particular situations that define how they move

through a drift, lie on the surface, and suggest a natural's movement. A fly pattern that addresses these dynamics goes beyond the basic GISS characteristics with a design for purpose. Tactical flies include features that address a fly's behavior (add movement that depicts life) and include feeding triggers like upright wings, segmentation, flash, and attitude (position in the film). Color and weight also enter into the equation. Tactical fly design aims to do more than just imitate food.

But our sport is more than just about flies. Where water types and currents frequently change, as they do on the Lehigh, proper fly delivery and control determine success. My line management skills are questionable on casts longer than 30 feet. That's why I'm a fan of tight-line nymphing and Tenkara. These techniques present flies with long rods and short lines and control drag by reaching over currents and keeping line off the water. They're very productive but exhausting because they require an "up close and personal" heron-like wading approach. I recently purchased a 10 ft./2wt. rod (and reel) that I hope will provide me with some new, less physically demanding presentation options.

In addition to being tactical, the flies in the mfb also reflect minimalist qualities. They are simple flies, use few materials, are quick and easy to tie (maybe with the exception of the George's Killer), and are durable and cheap.

I purchased a Lost Creek fly box at sportsmanswarehouse.com for \$3.99 to be my mfb. It can be configured for 20 compartments, measures 4.75" x 4" x 1.25" and can fit in a shirt pocket.

A Minimalist Fly Box—Continued:

I'm hoping that the mfb will liberate me from the consumer oriented side of fly fishing and point me towards a simpler and maybe more enjoyable way to fish. Minimalism isn't for everyone and it's going to take commitment. I'm sold on keeping a dozen patterns in the box and am resisting an urge to include some favorites that didn't make the cut. If I do add a new pattern, an existing pattern will be removed. This is mfb ver.1.0 and I fully expect it to change with experience. I'm going to try to use only the mfb for one year and I'll let you know how it goes. For me, it's all part of the fun and challenge of the sport! Good luck on the Lehigh!

Note: If you care to dig deeper, here's a short list of excellent books on presentation skills, the GISS approach to trout fishing, and reading water.

Presentation Fly-Fishing by Jeremy Lucas (2014) Tactical Fly Fishing by Jeremy Lucas (2009) What Trout Want by Bob Wyatt (2013) Moving Water by Jason Randall (2012)

Environmental Update

This spring LRSA members informed us about the Cunfer Farms intention to use Class B bio-solids near the confluence of Lizzard Creek and the Lehigh River. I attended a meeting at the East Penn Municipal building and saw much public concern about the use of fertilizers that are known to contain heavy metals, medical waste, and radioactive materials. The obvious concern for the LRSA is potential watershed contamination. Currently, there is no immediate threat as East Penn Township has obtained a six month legal injunction preventing the Cunfer Farm from using the controversial fertilizers.

In the final analysis, most fertilizers are not environmentally friendly and Class B bio-solids may even be a greener alternative if their use is carefully monitored and the materials used are inspected by a credible third party to ensure they do not contain unwanted toxic materials.

On another note, Plastic World Recycling in Bowmanstown is under investigation for dumping chemicals into Fireline Creek near its confluence with the Lehigh River. Both PAFBC and DEP are investigating the inci-

dent. I attempted to contact the owner after several LRSA members asked questions about the dumping and whether or not it is safe to eat fish caught in this area. The owner has not responded to my voice messages regarding the types of chemicals that they dumped and whether Plastic World Recycling would like to improve their public image by supporting our organization. The LRSA has tens of thousands of dollars in fish equity invested in this part of the Lehigh. I find it disheartening and disgraceful that a business owner would intentionally degrade a high value resource that other businesses rely on for their livelihood; including rafting businesses, fishing guides, and others that depend on river focused tourism. My thoughts are that Plastic World Recycling is a bad actor and should be treated as such until they improve the way they operate. Steve Chuckra



Photo courtesy of TV-13 News

https://www.brctv13.com/news/local-news/22105-a-local-business-is-accused-of-pouring-chemicals-into-storm-drain-that-leads-to-lehigh-river

Fishing the Little J. Beneath the Methodist Church By Harry Humes For Bruce Weigl and Bob Haas

I stand upstream with the spire and stained glass of the white church over my shoulder as when I was a boy in that coal town, trailing my string through silted-up mine water, thinking of my father's Sunday morning voice, and my mother's hands crossed in her lap, the sermon flow and choir.

Now my white fly with wings of mandarin feathers, belly of red fox fur and tail of ginger quill quarters across the current toward the overhang of willows where a trout has been feeding, and then to another in a swirl behind rock, the light growing less, until with the push of the current against my legs, my hands cold, I hear a faint music over the water, and for a while I am uncertain of where I am, or for what reason I cast long after dark at splashes as though I were trying to raise the spirit of this place, one fish of such heft that my life would be forever after set in the arc of its power.



Harry Humes was born in 1935 in the coal-mining town of Girardville, Pa. His collections of poems include *The Bottom*land (University of Arkansas Press, 1975), *Butterfly Effect* (Milkweed Editions, 1999), and *August Evening with Trum*pet (University of Arkansas Press, 2004). He lives in the country near Kutztown.

"Joe Goes "Hog Wild at Hog's Hole" - Matt MacConnell

While helping stock the mighty Lehigh back on April 14th this year I had the pleasure to spend a little time with

long time LRSA members Jim Sullivan of Mahanoy City and Joe Gavala of Barnesville. We had just stopped at the East Penn Boat launch stocking point when I snapped this picture of these two handsome gents, Jim at left and Joe is on the right.

After a while we were down river a ways stocking the stretch between Bowman's Island and Palmerton when Jim started reminiscing about a magical day when Joe decided to get intimate with the Lehigh and take a dip au natural. I immediately made it a point to take copious mental notes and thought to myself this tale needs to be shared with the world.....or at least the rest of the LRSA.

As the story goes 20ish years ago Joe and Jim were wetting a line up above where the Lehigh meets the



Francis Walter. It was springtime the river was pretty cold and flowing fast and most importantly the fishing was good. Jim tilts his head up smiles and with a devilish grin and begins to tell me the story of how the name Joe "the whale" Gavala came to be. "The place we were fishing was a deep hole with plenty of big trout called Hog's Hole. (Continued on page 8)

Page 7

Fly Fishing Journal—Tom Gyory

Lehigh River Fly Fishing Journal

June 2018

The spring was wet and cool in the Lehigh Valley. Fishing the River during the month of May was difficult due to high water. The hatches were interrupted and the fly fishing did not get back on track until June. The water temps stayed in the 60's until late June. Rising fish were subdued due to the sporatic hatches but swinging wet flies and streamers seemed to be the most productive option.

The photo to the right shows my most prolific fly this year that used with my switch rod set up. The photo to the left is LRSA member Doug Steimel holding a hefty rainbow that was caught just below Dunbar's.

The good news this year was the increased catch of possible wild trout. Several 9-10 inch browns and rainbows were caught especially near tributary streams. The rainbows were caught near the tributary that the Coop nursery is located.



This is especially encouraging since we have been stocking approximately 5000 rainbow fry for two years from our streamside hatch box program. The most recent class of hatching rainbows was especially successful due to some changes in the methodology that was used. The Vibert boxes were discontinued and hatching trays were substituted. This increased the hatch rate to almost 97%. Also, the fry were held longer in the hatch box until mid-June when they reached 2 inches. This should increase their survivability.

Because of the cool, wet weather I think the fishing season should safely extend into July without harming the catch and released trout.

Good luck. Tight Lines. See you on the Lehigh!



"Hog Wild" -continued from page 7.

I'm standing along the bank with Joe and next thing I know I look over at Joe and see his pole slip from his hands and get pulled into the river. Of course this in and of itself is funny since it's not my pole. Joe turns to me and asks should I get it?....should I go in there and get it? It's cold, the river is running fast, and he's old so I did what any good friend would do. I said Hell Yes you should. Jim at first scans the bank for anyone anything to help him. Then I could see something click in his brain and now he's scanning the bank to make sure no one is around. Joe yells over "Will ya come in with me?" Again as a good friend and a decent human being I took a moment to think and I screamed back Hell No! I thought to myself after all should things go south someone needs to live to tell the tale. Again if you haven't picked up on it yet I'm a great friend and an honorable man....that being said I had to poke the bear and scream come on Joe stop being such a GD sissy, go get it! I thought for sure that there's no way Joe is going to take the plunge. So low and behold one minute I'm fishing and next thing I know I look back and there's my fishing buddy Joe with nothing between him and the good lord accept a few rays of sunshine. He starts his trip into that cold cold water frantically and very nakedly starts poking around. Now my brain is still trying to process all of this and I see what looks like two canned hams floating down river he finally snags his line and quicker than I thought possible gets his pole back and somehow he still has the fish on the line.

At this point Joe is standing naked as a jaybird freezing his butt off and looking like a beached whale in the cold river. Now this fish has to be one for the ages because a grown man lost his pole, stripped naked, searched for his rod, and somehow it's still on the line. Surely this effort and this story has to be a happy ending. The fish is still fighting him and I run over with the net because now I want to be a part of this train wreck and this sure to be trophy. As the fish gets closer we realize yeah it's big a 3' carp. Now the fish isn't a keeper but the story is....and if you ask Joe how he got the nickname "the whale" I'm sure he'll have another story but this one's the truth."

LRSA Overview: Steve Chuckra

The LRSA was able to pay off the remainder of our fish loan in May with membership dues and funds raised from the sale of merchandise on our website.

Even though LRSA memberships are down approximately 15% from last year, the increase in membership dues to \$30 has financially offset the current deficit in memberships.

LRSA is revising our quarterly newsletter mailing to include more hardcopy mailings instead of emailing members copies of the newsletter. We are receiving feedback from a lot of you asking us for hardcopy newsletters. We started emailing the newsletters in January to save money on mailing expenses. By emailing newsletter, the LRSA saves approximately \$500 per mailing. However, we lost approximately \$1,000 in membership renewals each quarter after increasing newsletter emailing. The number of lost membership subscriptions closely matches the number of newsletters emailed to people who traditionally renewed their memberships in the winter and spring.

Moving forward, we intend to send hardcopies to members who have not renewed their memberships for 2018 and those of you that have stated that you prefer paper copies. For people who submitted membership subscriptions online and who have requested e-copies of the newsletter, we will continue to email you copies of the newsletter unless you tell us otherwise. If you would like to switch from hardcopy to electronic newsletter, please email me at stevec09705@yahoo.com.

In closing, I ask that if you have not renewed your LRSA membership this year, please consider doing it now! The amount of money we have in the summer helps us to determine the size of next year's fish budget. When we have a surplus in dues and donations after we pay the annual fish bill, we increase the size



Paul Davidson (610) 509-2715

Lehigh River Stocking Assoc. Sponsor

Licensed Guide

of our annual fish order based on the size of the funding surplus. Note: All of the fish we purchase are paid for prior to December. Buying fish early allows the LRSA to secure a 7% discount from our supplier and stretches the value of your financial contributions.

As always, thank you very much for your support! Sincerely, Steve Chuckra



Don Barwis, 2nd Place Winner with a 24" Lunkerfest Brown!

Lunkerfest 2018 was a nice success. Thanks to everyone who participated in and supported this event. LRSA started stocking the day of the contest because there are a handful of people who follow our event calendar and fish for the trophy trout the night before the contest. Going forward, we plan to open Lunkerfest to fishing as soon as we stock because the same bad actors insist on fishing for those trout while contestants patiently wait for Lunkerfest to officially start.

Some anglers feel that trout don't bite as well immediately after being stocked. We noticed that the number of fish caught this year exceeded the number taken in other years. The most significant determinant of fishing productivity appears to be water temperature and cloud cover, and we did notice a slow down in fishing between 11 am and 1 pm when the sun was highest in the sky. Fishing picked up in the early afternoon and more than 40 fish were registered for contest prizes. We measured several fish over 20 inches and approximately 140 trout were landed prior to the contest close at 3 pm..



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Water Quality Update

2018 Tributary Survey By Matt MacConnell

On June 24th I had the pleasure of heading out with a young man Mark Wang to conduct the 2018 Trib Survey on a nice bright sunny day. This year in addition to collecting the water quality information we also did a quick check for macroinvertebrates using a Serber Net and garden rake. The water quality monitor is a Hach DS5 and the measurements we collected are in the table below.

	Temperature	Sp Cond	рН	Nitrate	DO %Sat
<u>Jordan</u>	<u>64.4</u>	<u>436</u>	<u>7.66</u>	<u>12.52</u>	<u>91.9</u>
Catasauqua	55.8	515	7.7	14.48	77.3
<u>Coplay</u>	<u>65</u>	<u>615</u>	<u>8.04</u>	<u>12.64</u>	<u>95.6</u>
Hockendauqua	67.8	326	7.92	10.53	99.9
<u>Spring</u>	<u>68.2</u>	<u>550</u>	<u>7.92</u>	<u>15.33</u>	<u>89.9</u>
Fells	66	288	7.94	15.81	100.6
<u>Bertsch</u>	<u>66.3</u>	<u>241</u>	<u>7.99</u>	<u>10.25</u>	<u>101</u>
Trout	65.9	261	8.04	7.65	102.1
<u>Aquashicola</u>	<u>68.1</u>	<u>219</u>	<u>8.37</u>	<u>7.13</u>	<u>123.9</u>
Lizard	68.8	108	8.36	7.34	109.2
<u>Pohopoco</u>	<u>62.4</u>	<u>105</u>	<u>7.29</u>	<u>5.41</u>	<u>101.7</u>
Mahoning	68.8	119	7.74	7.5	107.2
Mauch Chunk	<u>63.4</u>	<u>76</u>	<u>7.35</u>	<u>2.92</u>	<u>98.8</u>
Nesquehoning	65.2	113	7.17	2.45	99
Lausanne Tunnel	<u>54.3</u>	<u>896</u>	<u>6.24</u>	<u>0</u>	<u>36.8</u>

Mark and I calibrated the probe with pH buffers, specific conductance, nitrate and dissolved oxygen solutions at 7am and then started at Jordan Creek in Allentown at 7:45 am, working our way north and finishing at the Lausanne Tunnel at 1:30 pm. So what do the parameters mean? We all know that cold is good and we can see the Catasauqua wins (not counting the Lausanne Tunnel mine drainage, which is the coldest), the Pohopoco coming in 2nd and the warmest trib is a tie between Mahoning and Lizard. Specific conductance is a measure of how much material is dissolved in the water, the lower the number the purer the water. Here we can see that Mauch Chunk wins followed by the Pohopoco, and the Lausanne tunnel is off the charts (full of dissolved iron, sulfate and manganese). With pH, 7 is neutral and that is ideal. pH higher than 7 means there is alkalinity from things like limestone and low pH is due to acidic sources, so we see the Lausanne tunnel discharge is slightly acidic and the Aquashicola and Lizard have the highest pH. pH is also strongly influenced by the photosynthesis of algae in the river which consume CO2 (reducing carbonic acid content in the river and causing pH to rise). Nitrate is unhealthy above 10 ppm and we saw some values in this range.



Nitrate can be caused by fertilizer runoff, agricultural runoff, or wastewater effluent that might not be fully treated. Fells and Spring Creeks have the highest Nitrate readings. DO %Sat means dissolved oxygen, percent saturation. 100% sat is the most O2 you can dissolve in water when shaking it up at atmospheric pressure. We see that the river can have > 100% which is due to photosynthesis. The aquashicola has the highest O2 level and indicates value that there was a lot of algae photosynthesis going on.

Water Quality Update - Matt MacConnell

Water Quality Continued -

As to the bugs, we were delighted to find crawfish in Bertsch and Mahoning Creeks. The bugs were very plentiful in many tributaries; caddis, mayfly, stonefly, cranefly, etc. We also encountered what we think was a young Hellbender salamander (which are rare) in the Bertcsh creek sample, the photo on the previous page is not a good shot but it scampered away so quickly that I couldn't get a good picture.

The Pohopoco sample had a beautiful helgramite as pictured below. Lots of indicators of healthy tribs. We did see numerous small leeches in the spring creek sample, not sure if that is a good thing or not. It was exciting to encounter the five foot black rat snake who was getting some sun at the Aquashicola bridge.



We did also encounter the landowner at Bertch Creek, Eric, who initially yelled at us sharply for trespassing. This is not the first time I have been chased off by him. However I did take the time to show him our water quality equipment and explained what we were trying to do for the good of the resource. He took interest when he realized we could help him with sampling a 4" sewer line which was draining into Bertsch from the farm across the street. In closing he asked that next time we stop by his house before going to the stream and we will of course be happy to comply next time.

A video of the tributary survey will be posting a video of the survey on facebook at some point so keep an eye out for that.

Helgramite



Rat Snake: photo-decapitated in frame by photographer Matt MacConnell



LRSA Received \$2,500 in grant money this year from the Lehigh Valley Sierra Club to conduct a survey of the Lausanne Tunnel AMD impoundment. The survey will determine how much it will cost to dredge and remove iron, aluminum, and magnesium that have accumulated in the wetland in the last 15 years. This maintenance is essential to ensure that the impoundment continues to trap contaminants that would otherwise enter the Lehigh watershed.

	LEHIGH RIVER ST	OCKING ASSOCIATION
LRSA	LRSA Board:	LRSA Officers:
PO Box 97 Lehighton, PA 18235	Tom Gyory, DMD	President: Steve Chuckra, 570-249-9247
Email: Lehigh.River.Stocking.Association@gmail.com	Karl Imdorf	Vice President: Vince Spaits 215-272-3175
The LRSA is a Non-Profit	Matt MacConnell, PE	Treasurer: Tom Gyory, 610-730-9359
Organization Dedicated to the Restoration and Restocking of the	Mike Schadler	Merchandise: Chuck
Lehigh River.	Chuck Morgenstern	Morgenstern, 610-216- 4022
Members and the general public are welcome to join us at our meetings— 7pm on the last Tuesday of every month (except December) at Wegman's Café, 3900 W Tilghman St, Allentown.	Steve Chuckra	Secretary: Ryan Scott
	Vincent Spaits	Newsletter Editor: Steve
	Ryan Scott	Chuckra
	Gary Klein	In fond memory of LRSA
Friend us on <u>facebook</u>	Greg Gliwa	Founder, Ted Miller

LRSA MEMBERSHIP APPLICATION

I want to support the Lehigh R	iver Stocking .	Association and their	efforts to restore an	d stock the Lehig	h River.
Is this a renewal membership?					
Name	Address	5			
City	State7	ZipPł	ione		
Email	Age	Email my newslett	ers <u>Yes</u> No		
Basic Membership — \$30	All membershi	ips include badge deca	lls, ID card, and an	annual newsletter	r subscription.
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Diamond Membership — S	500 Amount o	of membership you we	ould like to direct to	wards LRSA Con	servation Program
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Amount of check or money ord	er enclosed	You can also j	join or renew on our	website: www.l	rsa.org

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Please note: All LRSA Memberships include a newsletter subscription.