LEHIGH RIVER STOCKING ASSOCIATION

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Issue 61, August 2015

The Lehigh River Report

The Voice of the Lehigh River Stocking Association

LRSA's Running Total:

Trout Stocked: 341,900

Inside this issue:

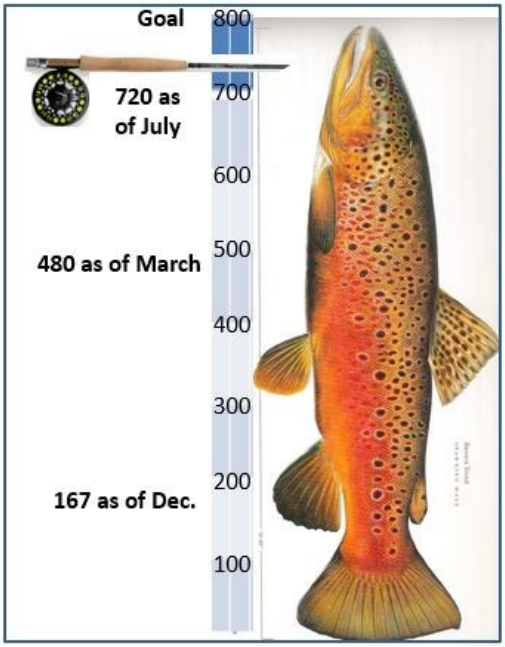
LUNKERFEST 2015 RECAP With over 200 anglers participating in the 5th Annual event on May 30th, well over 100 trout caught and over 70 prizes given out we can report the event was a big success. The day was warm and the river was lower than usual but our stocking 300 17-20"+ fish Friday night followed by 400 fish Saturday morning worked. LRSA spent over $6,000 for fish but had $1,000 in prizes donated, along with the donated food sold at concession, so were able to clear about $1,000 to put toward 2016 trout stocking. Please see our web site for a listing of all the generous sponsors and see the winners listed on pg. 2. Thanks everyone for coming out and we look forward to 2016!

Jason Christman with 24.5" winning trout at Lunkerfest

Of course Lunkerfest sets the stage for a season of great trophy trout fishing as the season goes on. Take for example the 24.5" rainbow caught (photo below) and released by Brian Berdy at Bowmanstown on July 11th .

ALSO—Sponsorships this year set a recent record topping 720 . Together with strong ticket sales we are sitting on $4,000 to spend on more trout for the Lehigh River!!

LRSA 2015 Sponsorship Tally



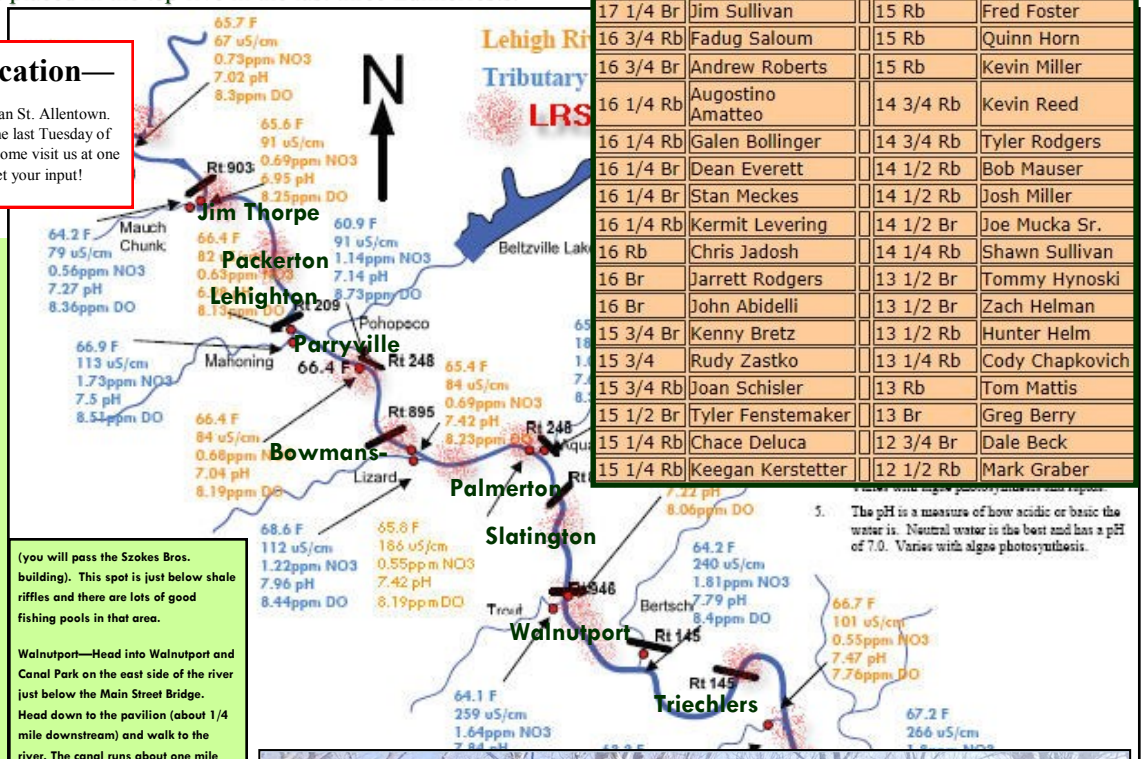
Justin Koch attempts a kiss on a big rainbow; Taffy Connolly dons the Miss Lunkerfest regalia and at left Jim Sullivan brings in his 17" catch good for 7th place!

LUNKERFEST 2015 WINNERS—The contest limited prizes to one per persons, many of the fishermen had caught multiple fish and many fish were released. Forty six fish are sorted with the largest fish getting first dibs on the prize list. There were over 70 prizes available and this were raffled off using the door prize tickets given to each contestant. Congratulations to the winner Jason Christman and all the others. It is noted that Josh Eichler has placed in the top five in the last three Lunkerfests.

24 1/2 Rb	Jason Christman	15 1/4 Rb	Dale Edwards
23 3/4 Rb	Kenny Sutton	15 1/4 Rb	Matt Gibas
19 Br	Victor Vazquez	15 1/4 Rb	Marty Williams
18 1/4 Br	Joe Elm	15 Rb	Stephen Miller
18 Br	Josh Eichler	15 Br	Chris Krystopa
18 Rb	Mark Bollinger	15 Rb	Jason Moyer
17 1/4 Br	Jim Sullivan	15 Rb	Fred Foster
16 3/4 Rb	Fadug Saloum	15 Rb	Quinn Horn
16 3/4 Br	Andrew Roberts	15 Rb	Kevin Miller
16 1/4 Rb	Augostino Amatteo	14 3/4 Rb	Kevin Reed
16 1/4 Rb	Galen Bollinger	14 3/4 Rb	Tyler Rodgers
16 1/4 Br	Dean Everett	14 1/2 Rb	Bob Mauser
16 1/4 Br	Stan Meckes	14 1/2 Rb	Josh Miller
16 1/4 Rb	Kermit Levering	14 1/2 Br	Joe Mucka Sr.
16 Rb	Chris Jadosh	14 1/4 Rb	Shawn Sullivan
16 Br	Jarrett Rodgers	13 1/2 Br	Tommy Hynoski
16 Br	John Abidelli	13 1/2 Br	Zach Helman
15 3/4 Br	Kenny Bretz	13 1/2 Rb	Hunter Helm
15 3/4	Rudy Zastko	13 1/4 Rb	Cody Chapkovich
15 3/4 Rb	Joan Schisler	13 Rb	Tom Mattis
15 1/2 Br	Tyler Fenstemaker	13 Br	Greg Berry
15 1/4 Rb	Chace Deluca	12 3/4 Br	Dale Beck
15 1/4 Rb	Keegan Kerstetter	12 1/2 Rb	Mark Graber

Monthly Meeting Location—

Market Café, Wegmans, 3900 West Tilghman St. Allentown. Meeting time from 7:00 to about 9:00 pm the last Tuesday of each month. We encourage our sponsors to come visit us at one or more meetings, we would love the get your input!



LRSA stocks trout in four main areas along the 29 miles of river between Northampton and Jim Thorpe. A listing of most popular spots are:

Jim Thorpe—use the train station parking lot where the rafters put in (it is just below the 903 bridge). Or, you can walk up river a bit. Also try Glen Onoko—follow 903 over the river and stay left into the park. There is a great trout pool a short walk from the parking lot, or you can walk or ride a bike upstream into the gorge to Park Bench, Bear Creek trib area is also very good.

Packerton—pull off 209 where the road dips down steeply between Lehighton and Jim Thorpe. You can park and walk straight back to the river, lots of good access there. Head down river about 100 yards to pump house and you will find a riffle with a deep pool behind it.

Lehighton—Make a right off of 209 at Dunbar's Beverages and take the road all the way back to the rocky beach near the river. Or, drive down stream on the access road that runs parallel to route 209 and walk in.

Parryville—Pull off route 248 at the Rock Hill Cement Company and park at the Canal Park area. The Pohopoco Creek confluence with the Lehigh provides very good, cold, conditions for trout. The Pohopoco holds fish too, particularly below the dam.

Bowmanstown—Fishing is good above or below the Route 895 bridge. You can park under the bridge. Or, drive down to the new boat ramp about 1/2 mile south of Lizard Creek, on west side of river: we call the large pool the "Musky Pool" and it is where we hold Lunkerfest.

Palmerton—Head south on 248 and take the Palmerton exit. Take the second dirt road to the right and head down to the "horseshoe." The river forms a big bend in that area and there is a pool just below the rapids.

Slatington—Heading east on 248, take a right over the 873 bridge and you will see Slatington Fabricators on your left. You can find a place to park along the road at that point and walk-in access to the river (you will pass the Szokes Bros. building). This spot is just below shale riffles and there are lots of good fishing pools in that area.

Walnutport—Head into Walnutport and Canal Park on the east side of the river just below the Main Street Bridge. Head down to the pavilion (about 1/4 mile downstream) and walk to the river. The canal runs about one mile down to Bertsch Creek. You will find many good pools along the way.

Triechlers—Heading north on Route 145, take a right onto Cove Road before you get to the bridge. Drive down and park under the bridge. Fish there or head up stream to the fantastic pool just below the old dam.

Laurys Station—Take River Road on right as you are heading North on Routet145. Drive down and park at the dead end.

Northampton—Fish below the dam where Route 329 crosses the Lehigh. Anywhere from the dam down to the pavilion area is a good area for fishing.


Walnutport behind pavilion

LRSA stocked a 50/50 rainbow/brown mix in the 14-17" size range. Lunkerfest involved 17-25" size ranges. About $28,000 was spent on fish, which is about 6,500 fish spread out between Glen Onoko and Northampton. Couldn't do it without you, thank you for your $$.

Lehigh River Fly Fishing Journal

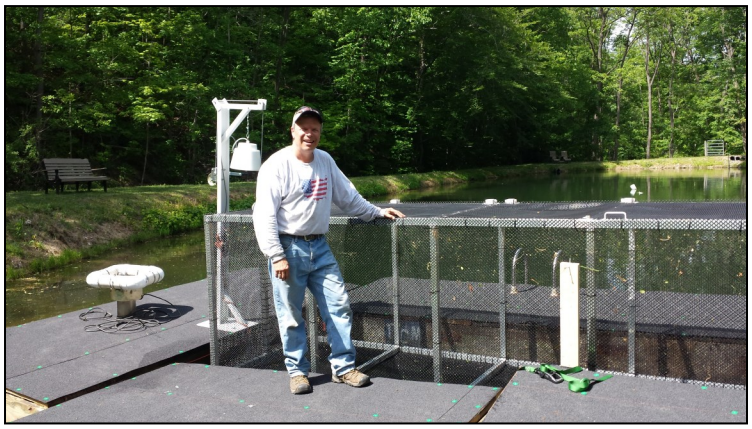
By Tom Gyory

The LRSA had another great spring on the Lehigh. Increasing membership, plentiful stocking, dynamite fishing, and an exciting Lunkerfest were all had this year.

New this year is the LRSA / Pennsylvania Fish and Boat Commission Co-op Nursery. It was a big project but the pieces came together on time and on budget with a concerted effort by many people. It started last year with LRSA member John Berry's idea and determination to start a co-op nursery. After several failed attempts to restart nurseries in Saucon Park and Kris Pines due to DEP regulation issues, John suggested my pond, and I was happy to oblige. The application process began last February with PA Fish and Boat Cooperative Nursery Unit's Brian McHail and Allen Keim. Several water quality tests were performed and we were approved.

The next step was planning the nursery infrastructure. Allen showed me a trout pen layout that was appropriate for the pond. (See photo) He gave me the name of another cooperative nursery, Coventryville Trout Club, near Pottsville with this type of setup. I made a visit to the Nursery in March, where manager Jeff Moser, helped with equipment suppliers and overall trout rearing advice. We modeled our nursery on the Coventryville design.

The first step in the construction for the nursery was an electric line to the docks. While this was being completed, the aluminum trout pen was fabricated by David Beers of Lehighton (he also fabricated my drift boat the Trout Scout) and then volunteers from the LRSA helped to attach the ½ inch plastic netting with over one thousand zip ties to the frame. In April I was able to acquire some used docks for a few hundred dollars from TJ's Dock fabricators near Lake Wallenpaupack. We needed to customize them for our use and then moved them into the pond. This is the subject of one of our great video productions by President Matt MacConnell that you can see on our website www.lrsa.org and our Facebook page.



We finished the assembly in May and put the pen in the water with a few days to spare. One thousand 4 inch rainbow trout were successfully delivered by Barry from Fish and Boat on June 15, 2015.

As you can see from the photo, there are two winches on either end of the dock to lift the pen in and out of the water for cleaning and repair and there is an aerator inside the pen for oxygenation. Much of the nursery equipment (aerators, nets, and transport tank) was purchased at a greatly reduced price from Colleen and Dustin Miller of the now defunct Bertch Creek Hatchery. There is also a light with a bug killing spinner that knocks the bugs into the water for supplemental feeding and there is an automatic feeder that feeds measured amounts of fish food 4 times a day.

There is very little daily maintenance. Water temperature and fish deaths are recorded. The water temperature in June has been 65 degrees or less. We lost about 8 fish so far most likely due to the fish jumping into the aerator. To prevent this, the aerator has been completely enclosed with plastic netting. Scrubbing the plastic netting around the entire pen to remove algae everyday takes about 10 minutes of effort and that's about it. The fish are predicted to grow about 1 inch per month and should be 12-14 inches and ready to stock by May 2016. I hope to expand the project next year to double the size of the nursery if everything goes well this year.

The cost of construction for the project was approximately $6000. The LRSA is getting a grant for 50% of the cost from the PA Fish and Boat. Food costs are estimated to be $1000 per year. I would like to encourage members to donate for fish food. Please send contributions to the LRSA and put fish food on the check. Thank you.

I want to thank everyone who helped get this project off the ground including the folks mentioned above and also Jim Heffner, Chuck Morgenstern, Vince Spaits, Steve Chuckra, Greg Gliwa, Dave Carl, Carl Imdorf, and my very patient wife Maureen.

If anyone wants to visit the nursery or help out, please text me at 610-730-9359 or email me at tomgyory@gmail.com.

See you on the Lehigh.

FLY SOUP by Scott J. Lechki

The Stonefly Guy

Fly Soup? Who would want to make soup from flies? Well, it is not really some crazy gourmet dish; it is the name I came up with for a book I am writing. After reading countless books and articles in various fly fishing magazines over my 50 years of fly fishing, I've come to the conclusion that they all say the same things. They begin with equipment, giving all kinds of detailed information about rods, reels, line, boots, leaders, and popular apparel. Followed by the general explanation on wet fly, dry fly, and nymph and finally author's favorite fly selections and when to fish them is presented. Read one book and you learn just enough to get confused and form opinions on what really works for you.

Fly fishing has many factors that vary from day to day making it difficult to try and set any kind of standard. Water temperature seems to be one of the most important factors related to fly fishing; however, it is not a 100% fool proof bit of information. Considering this and other factors I think I've had many days of successful fishing because of what I didn't know.

As a kid, or let's say a beginner, I had a limited selection of flies from which to choose. There weren't many books or fly shops around for me to research and get information to apply to my fishing technique. I fished with my uncle and a few of his friends who were complete anglers. They used bait through the first month of the season including: Salmon eggs, worms, corn, and meal worms. When nothing was biting, we'd throw my #1 fly of all times, the Caddis Larvae. Generally, it was green, a size 14 or 16 and was fished like bait, cast upstream and you'd wait for that one quick tug which determined you got a bite. There was no bump, bump, bump on the fly, it was one hit and done. This became interesting to me, no slack time, be ready for that strike or miss your opportunity to catch a fish.

Generally we determined when to use these simple patterns by gutting the first fish caught that day and inspect the stomach content. Here is where it started to complicate itself. Upon this inspection, I realized there were green, gray, tan, black, and even pink Caddis Larvae in the stomachs of the fish. So begins the fly box with an assortment of different color and size Caddis Nymphs. Ok, fine, I'd usually start with two flies on my line, one green and one gray then came the dilemma of how much weight to use to have them be successful. That too changed from bouncing them on the bottom to using no weight and fishing them suspended. Well, that's not too bad, with a little trial and error you usually came up with what color and how deep. Then, for some reason, fish started becoming educated and we were required to use very thin leader to make it work, so we adjusted and began to catch fish on a regular basis until the water began to warm up. In May we began seeing trout coming to the surface to feed on May Flies which like the Caddis Flies were different in size and color. Generally; however, it was the same story with dark flies coming first like the Quill Gordon and Hendrickson and later becoming lighter going through Blue Wing Olives, March Browns, Red Quills and on to last, but not least, the light flies from Yellow May Flies, Light Cahill, to Pale Evening Duns to White Flies, now it is getting confusing.

What fly should I use and when? Well, I guess this is what keeps us coming back, experimenting with different flies, new patterns, different methods, and materials. All this information has come down from a cast of experts who have shared this information via books, magazines, movies, and now the internet creating what I call a state of confusion. What fly do I use? How do I fish it? What size? What color? Confusion and doubt are created limiting the use of our natural instincts. I've caught countless fish on flies that weren't supposed to be the ones for that stream or that time of year. Confirming one thing to me, there really was no set fly or time to use it.

One day while out fishing with my Uncle I noticed a group of men dry fly fishing and watched them catch one fish after another. Being a youngster at the time, I wanted to know what the hot set-up was. I got my boots on and waded out to the veterans asking the age old question: "What kind of fly are you using?" One of the gentlemen responded to me "Insignificants". Uh-Oh, I thought, what was an "Insignificant"? I never heard of that fly, so pretending I knew what the guy meant, I positioned myself downstream, put on a size 14 Quill Gordon and began casting. It didn't take long until I caught my first fish only to find the fly had been destroyed by the Trout's sharp teeth. Having no more Quill Gordon's in my fly box, I pulled out a Pale Evening Dun (also a size 14) and caught a fish on my next cast. Three fish later there came a fly fisherman's nightmare, I got hooked in a tree loosing, you guessed it, my only Pale Evening Dun, oh crap, what do I do now? Back to my trusty fly box and all I had left was a bushy old Royal Coachman (about a size 10). I figured I was done, when sure enough, a few casts later I was battling a big 18" Rainbow.

Later that day I caught up with my uncle and told him of my success with dry flies. He asked me what flies I was using and I replied: "A new pattern I learned from another fisherman called an Insignificant." So there it is the first lesson from "Fly Soup": sometimes the fly pattern or size doesn't really matter.

Author Scott Lechki at the 2015 Lunkerfest

Why Do we Hurt the Trout we Love? By Steve Chuckra

Sounds kind of sappy for an L.R.S.A newsletter doesn't it? I am of course referring to fishing, in particular, the practice of catch and release. About 20 years ago, I described fly-fishing to an Italian friend of mine. She was immediately interested because she has an Italian's passion for food and loves fish. When she asked me how I like to prepare trout, I told her that I normally don't take them. My friend let me know in no uncertain words that she thought catching a fish with no other purpose than to release it was cruel. I quickly defended the practice of catch and release with a heart-felt line about how there wouldn't be very many fish or fisheries if anglers kept everything that they caught.

That seemed to satisfy my friend's sensibilities, but I find that I occasionally reflect on that conversation when I release a trout. From my perspective, the best releases are when my fly comes out of a trout's mouth at the instant it lands in my net or, just before the net for that matter. That way, I don't even have to touch the fish and it never leaves the water. I like that, because I feel reasonably certain that the fish has a good chance of surviving the encounter and that I have a good chance of meeting up with that trout again. It doesn't always work that way though. Sometimes a fish will take your offer pretty sincerely and circumstances will require that you perform minor surgery on your prey if you wish to release it. This is when having a good pair of hemostats, decisive hands, and using a barbless hook pays off. I did not use the word "hooks" in that sentence. If you plan to release your fish, one hook is best. It's also a good idea not to remove a fish from the water if you intend to release it or play it to the point of exhaustion.

However, this brings us back to the original question, "why do we hurt things we admire and value?" I think that answer varies from person to person and that many of our spouses might feel compelled to ask us that very question. My personal opinion is that when people are deep enough to contemplate this stuff, they will most likely do things to compensate for the perceived damage that they do. For me, I stock fish and do volunteer work for sportsmen's venues. I also make it a point to leave a stream better than I found it by picking up trash streamside and pulling out the occasional snag.

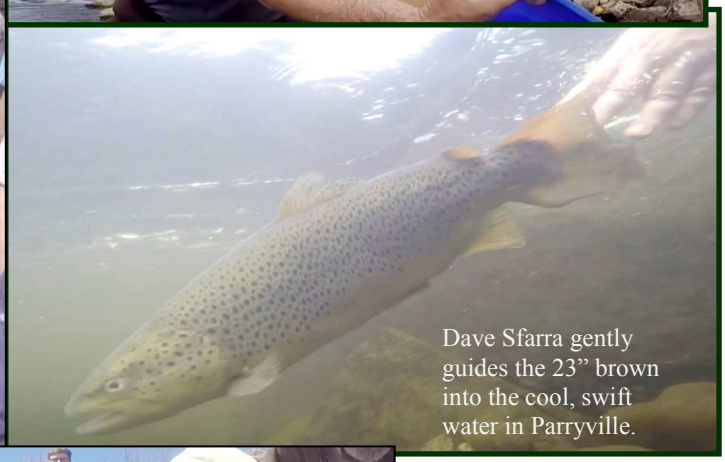
As anglers and hunters, we are stewards of our fisheries and woods. Without our contributions, these areas would not exist as we know them. Revenue from license sales alone generates billions of dollars of revenue in the U.S. and funds state stocking programs and environmental initiatives that benefit not only anglers and hunters, but society in general. I find it funny that people who never venture outdoors for recreational purposes criticize fishing and hunting. As if not hunting or fishing actually contributes to the welfare of the local fish population or deer herd. Anglers in particular, have a symbiotic relationship with fisheries. We may inadvertently harm fish from time to time, but we are also the reason that the fish are still there. The Lehigh River and L.R.S.A. is a perfect example of this.

Without organizations like L.R.S.A. there would be far fewer trout in the Lehigh River. L.R.S.A. is able to stock the Lehigh solely because of the support and participation of members like you. Without this team approach, the river would not be a viable fishery. We want the trout, those objects of our affection, to be in the river forever, so we can enjoy them forever, and occasionally torment some of them. Basically, for the same reasons our spouses want us to eat better and exercise.

Author Steve Chuckra stocking energetic trout for Lunkerfest

Memorial Fish Releases—Memoratus in Aeternum

The daughter of late and long time LRSA sponsor Joeseph Kenzakoski, Jr. (72) gathers with family to release a trophy brown in Slatington (below left) in Joe's memory at our April 12th stocking event. Three other trophy trout were released on this spring day. Two Zellner family members (2nd below) released a 20" brown in memory of her husband, father and long time LRSA sponsor Lee D. Zellner (55). A large brown was released in memory of LRSA sponsor Bob Erle, Jr. (55) and Lori Paules released an 18" brown in memory of her son Zachary Paules (23). Dave Sfarra (right) releases a 23" brown during our stocking event May 9th while family members look on in memory of his late daughter Samantha who departed to early. Videos of these events are on our facebook page. The LRSA hopes that this release of beautiful and wiley brown trout into the mighty Lehigh River will in some small way help in the remembrance of loved ones. Thank you.



Dave Sfarra gently guides the 23" brown into the cool, swift water in Parryville.

The LRSA is happy to provide families with memorial trout releases. Please contact us if you would like to consider doing this.

Memoratus in Aeternum—Latin for remembered unto eternity.

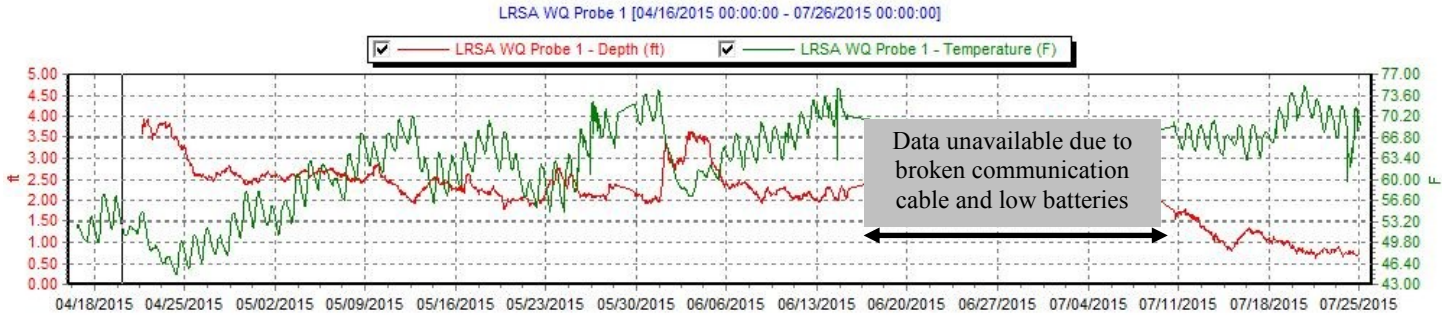
Late Spring Ticket Drawing Winners

#1. Richard Schnell, Palmerton; #2. Bill Pastucha, Summit Hill; #3. Joe Bnosky, Tamaqua; #4. Bill Bachman, Allentown; #5. Anthony Gutsie, Mahonoy City; #6 Carl Reichl, Catasauqua; #7. Anthony Gutsie, Mahonoy City; #8. Rick Ryan, Bethlehem; #9. Frank Hendershot, Ben Argyl; #- FiTicket was for fish fund but redrawn, #10. ? Weber, 570 area; #11. Bob Morris, N. Wales; #12. June Scharf, 570 area; #13. Joan Schisler, Philadelphia; #14. Jasmine Puibsomi, Danville; #15 Ronald Kehley, Warminster; #16. Edwin Palansky, Walnutport; #17. Leroy Schaeffer, Walnutport; #18. Andrew Hauer, 570 area; #19. Mike Birosik, New Ringold; #20. Rick Gonsky, Allentown. The order of tags picked designates the prizes level and these are all $25 except #1 is $100, #9 is $50, # 11 is $50 and # 19 is $100. Thank you everyone.

On July 17th fifty high school students enrolled in the PA Governor's Science, Engineering and Technology program at Lehigh University took a field trip to the Lausanne Tunnel AMD site in Jim Thorpe. In photo above, Matt MacConnell directs the students as they mobilize to study 5 different subjects at the site. Below from left—Jim Deebel instructs on macroinvertebrates, the feeder aerator and a Lehigh Student describing use of the LRSA water quality probe.

Lehigh Temperatures—Two Miles South of Slatington

One of the two LRSA water quality monitors has been deployed in Lehigh County for 24/7 monitoring. We had trouble with high water ripping the cables apart causing loss of about 4 weeks in June. Still, we have a good deal of data and are now heading into the hottest period of the year, early August. The results from this study will be to contribute to our documentation that yes, in fact, the Lehigh River is well within parameters Pennsylvania sets for trout stocked fisheries. This data, is important to our stocking program and we hope will help to get support from PFBC in helping us stock in the future, hopefully starting in 2016.—by M. MacConnell



Temperature statistics: Average = 62.1, minimum 44.5F, maximum 75.1F (on July 20th). Dissolved O2 is good at Avg = 98.6%, min 86.9% and max 118.7% saturation.

Understanding Bioacoustics to Catch More Fish— by John Mosovsky

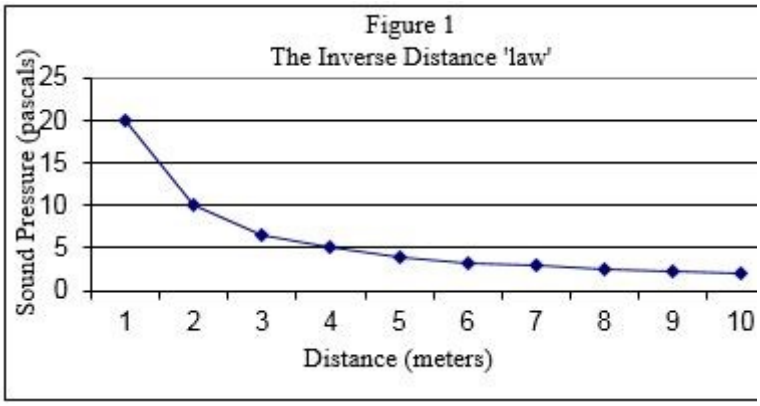
This article is the second in a series that provides practical tips and/or information developed from the science of bioacoustics; the study of how sound (or the noise we generate) travels underwater and how it affects fish.

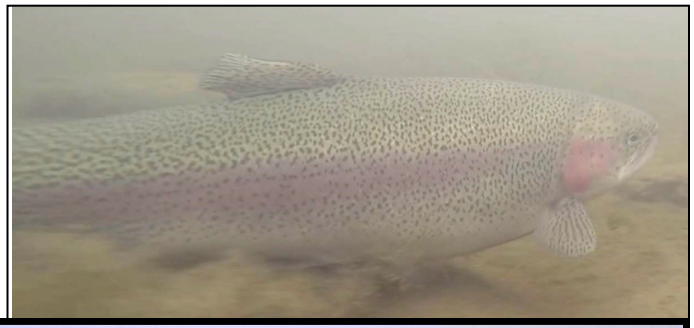
Applying Hydroacoustics to Wading Noise

We know energy conservation, food availability, and protection from predators (safety) determine fish position. In addition to these three conditions, the underwater acoustic environment of specific water types (riffles, runs, and pools) may also play an important role. This may seem insignificant, but it could change the way we think about fish behavior and how we approach them.

Hydroacoustics is the study and application of sound or noise underwater. Because of the physical differences between water and air, sound waves travel almost five times faster and four times farther in water vs. air. The noise that we generate while wading comes from splashing, metal boot studs scraping on rocks, wading staffs hitting rocks, and moving stones and rocks as we walk along the river bottom. Generated noise compresses and moves through water as a waveform with a specific wavelength, amplitude (loudness), and frequency. Whether or not we spook fish with the noise we generate depends upon these sound wave characteristics as well as the anatomy and physiology of specific fish species. Each fish species has a specific auditory bandwidth of frequencies and a hearing threshold for each frequency which defines the sounds it can hear. The noise we generate is actually made up of many frequencies but in order for a fish to hear it, at least one of the frequencies must fall within the fish's auditory bandwidth AND that frequency must exceed its hearing threshold. When we wade, we generate low frequency noises that fall within a fish's auditory bandwidth. This low frequency noise also travels farther than high frequency noise and farther in deep water vs. shallow. Whether or not a fish will hear the noise we generate depends upon how loud it is and how close we are to the fish. Fortunately for us, as the noise we generate travels away from us, it dissipates rapidly. For example, when the distance from us is doubled, the noise loudness (sound pressure) is reduced to ½ its original value; when the distance is tripled, the noise loudness is reduced to 1/3 its original value; quadrupling the distance results in ¼ its original value, etc. (Figure 1). This rapid dissipation of noise loudness is in our favor because it can quickly reach a level that fish cannot hear, i.e., it does not exceed their hearing threshold.

Frequency and amplitude (loudness) are the primary noise characteristics that determine whether or not fish will be spooked by our wading noise. The transmission of underwater noise is, however, complicated by water depth and topography because of scattering and reflection. Also, noise that we generate may or may not spook fish depending upon the water velocity and flow rate of different water types and their associated underwater ambient noise levels. In addition, hearing sensitivity varies with fish species. Carp, catfish, and shad are more sensitive to underwater noises than trout, bass, perch, and sunfish. More on fish biology and hydrology in future articles.





An Analysis of Brown Trout Behaviors—by Evan Williams

The brown trout, similar to other freshwater organisms, is susceptible to reproductive isolation within a river system. Due to isolation it is important to understand migrating patterns and their reproductive techniques. While brown trout will typically leave their natal stream to seek out larger bodies of water that provides an ample food source (Charles et al. 2000), there is strong evidence that 95% of adults spawn in their natal stream (Quin, 1984). There are similar results seen in anadromous pacific salmon (*Oncorhynchus*). The pacific salmon become reproductively isolated and each population of salmon is genetically adapted to their natal habitat. In an arborescent river system trout must allowed to freely move through productive spawning and feeding habitats. If there are blockades within a river system this can severely inhibit seasonal migration patterns.

The family of Salmonidae are not known to exhibit male parental care. Further, only 4 % of teleost fish families are known to have parental care from both sexes. Parental care has been observed in female brown trout. This involves the female manipulating the gravel and constructing a redd or an egg nest, which is then guarded for roughly 30 minutes after actively spawning (De Gaudemar & Beall, 1999). Females are limited by the number of viable eggs that they can be produced and are capable of having eggs fertilized by multiple males due to their external fertilization. The male brown trout is limited to the number of mates it can successfully spawn with, and therefore there may be no benefit for the male to provide parental care. Males utilize aggressive behavior to obtain a spawning female. To prevent competing males from spawning dominant males become territorial, and increasingly attack rival males as a female becomes closer to spawning (Tentelier et al., 2011).

The most interesting behavior occurs immediately after a successful act of spawning. The fertilized eggs are most susceptible to cannibalism by competing males within the first two minutes after spawning, until the female buries the eggs. During the two minutes after spawning, the number of potential predators increases. The potential predators are male brown trout that did not successfully spawn. To reduce the number of cannibalistic attacks the dominant male, or the male that successfully spawned, increasingly attacks and chases predators. The attacks significantly lowers the probability of egg cannibalism and can be interpreted as male parental care. This behavior was not caused by intrasexual competition, or the competition between two trout of the same sex to obtain a mate, because the female has already spawned and another spawning event takes several hours to occur. Therefore, the male is reducing the number of potential cannibalistic attackers and raising the number of offspring it can produce. It was also observed that the male leaves the spawning site after the eggs are buried in gravel by the female. The new observation of male paternal care in brown trout causes sexual selection within males. The males, which are best suited to prevent egg cannibalism, by being able to attack and chase predators have a higher probability in reproductive success than males that cannot prevent egg cannibalism.

The brown trout also has a highly variable foraging pattern, which changes throughout its life cycle. Smaller brown trout are limited by the size of the food they are capable of consuming. This is caused by their gape size, or how wide their mouth can open. As the fish begins to mature it is capable of broadening its diet. Therefore, larger trout tend to shift towards a piscivorous diet, but the size of the prey is not a result of a predator preference. Instead larger preys are more often consumed when they are more abundant. Patches of habitat within the same ecosystem may contain different age structures of the preferred prey, which would cause *S. trutta* to feed on the most abundant available food source, regardless of the size (Hallvard et al., 2004).

While the abundance of a prey may play an important role in the diet of brown trout, habitat structures also alter feeding strategies. Different age structures of brown trout react differently to habitat with woody debris. In habitats that contain low amounts of woody debris, larger trout fed more heavily, when compared to habitats with high amounts of woody debris. High amounts of woody debris ultimately decreased the overall activity of larger trout, which also changed their feeding strategies from active hunting to ambush. The large amounts woody debris also affect the assemblage of larger trout, which are typically seen higher in the water column when actively feeding due to a lower predation risk by larger organisms. In increasingly complex habitats, larger trout are found near the bottom of the water column under logs, and are typically inactive. This change in behavior may be caused by the dominant fish being capable of using the most optimal microhabitats when they are available (Gustafsson et al., 2012).

A social hierarchy exists within brown trout populations to determine which specimens utilize different types of habitats. It has been observed that larger trout become increasingly aggressive when defending optimal habitat. However, the amount of time it takes to establish a hierarchy is variable within populations. Similar-sized specimens compete heavily for optimal habitat. Even after dominance is achieved, the dominant fish will continue to be challenged by subordinate trout that are similarly sized in their attempts to obtain the most suitable habitat .However, if the challenging fish is not of similar size, the number of attacks by the dominate fish decreases and the subordinate discontinues its attempts to achieve dominance. (Gustafsson et al., 2012).

In conclusion, brown trout have complex and variable behavior. They are seen to be very adaptable within different habitats, and are capable of utilizing a variety of behavioral techniques that allows the species to be successful in a variety of habitats. Evidence has been seen in brown trout that both sexes are capable of parental care. The males exhibit parental care directly after fertilization to lower the amount of cannibalism of recently fertilized eggs.

LEHIGH RIVER STOCKING ASSOCIATION

LRSA

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A Non-Profit Organization Dedicated to the Restoration and Revitalization of the Lehigh River Trout Fishery.

Sponsors and interested people are welcome to join us at our meetings— 7pm the last Tuesday of every month at the Market Café at Wegmans, Tilghman St., Allentown

www.lrsa.org

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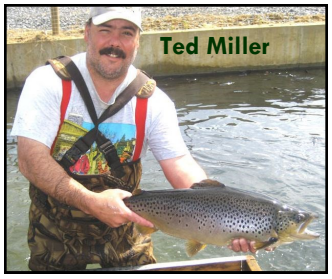
In Memoriam—LRSA Founder, Ted Miller



7 out of 10 LRSA board members pictured at left at Lunkerfest event. From left: Tom Gyory, Vince Spaits, Gary Klein, Dave Carl, Matt MacConnell, Karl Imdorf and Greg Gliwa.

LRSA 2015 Tagging Program

The results as of mid-July are posted below. You can see where and when fish were stocked vs. caught. Detailed analysis has not yet been completed but we wanted to share the raw data so you can see how it looks so far. The LRSA would like to thank the Lehigh Valley Sierra Club for funding this tagging program, Gary Klein for leading the program and Karl Imdorf for his wizard work on Excel.

continued

Tag Number	Reported Caught	Species	Size	Catch Location	Name	Date Stocked	Stocking Location
25	13-Apr-15	Rainbow	17.0	1/2 mile below Cementon Dam - Tressel	Brian Hook	12-Apr-15	Northampton Pavillion
46	14-Apr-15	Brown		Szokes	N/A	12-Apr-15	Access Ramp at 873 Bridge
48	14-Apr-15	Brown		Szokes	N/A	12-Apr-15	Szoke Brothers
33	17-Apr-15	Brown		873 bridge	Justin Koch	12-Apr-15	Pillars
43	17-Apr-15	Brown		Slatington	N/A	12-Apr-15	Walnutport Pavillion
60	18-Apr-15	Rainbow		JT Train Station	Steve Heydt	18-Apr-15	Jim Thorpe Parking Lo
35	17-Apr-15	Rainbow	17.0	Pillars	Steven Schrader	12-Apr-15	Pillars
100	18-Apr-15	Brown	16.0	Bowmanstown	Zachary BonHomme	18-Apr-15	Bowmanstown Bridge
33	16-Apr-15	Brown		Walnutport Bridge	Todd Woznick	12-Apr-15	Pillars
124	16-Apr-15	Brown		Big Pool at Palmerton	Mike Curan	18-Apr-15	DNL Trail 2
65	19-Apr-15	Rainbow	17.0	Pack Dip	Ryan Scott	18-Apr-15	Packerton Dip
105	22-Apr-15	Brown		873 Bridge	Chris ?	12-Apr-15	Orange Tagged Memorial Fish (873 ...
123	26-Apr-15	Brown	20.0	Cove at Palmerton	David George	18-Apr-15	DNL Trail 2
109	26-Apr-15	Rainbow		Bowmanstown Boat Ramp	Tom Strohl	18-Apr-15	Bowmanstown Boat Ramp 2
90	26-Apr-15	No ID		Parryville	Gino Cicioni	18-Apr-15	PATP Bridge
?	26-Apr-15	?				#N/A	
55	28-Apr-15	Rainbow	18.0	JT Train Station Beach	Eric Buskirk	18-Apr-15	Jim Thorpe Train Station Beach
41	1-May-15	Brown	15.0	Walnutport Boat Ramp	Rick Boyer	12-Apr-15	Walnutport Pavillion
125	25-Apr-15	Rainbow		Above Palmerton	Zero Kill Guide Servi	18-Apr-15	DNL Trail 2
82	3-May-15	Brown	17.0	Behind Midas in Lehighton	Bill Hosier	18-Apr-15	Parryville
56	6-May-15	Brown		upstream of new bridge in JT	"Harpo"	18-Apr-15	Jim Thorpe Train Station Beach
149	10-May-15	Brown	15.0	1/4 mile upstream from Dunbars	Chris Gasper	9-May-15	Dunbar
28	10-May-15	Brown	20.0	Lehigh Gap south of Aqushicola	Todd Serfass	12-Apr-15	Cliffs
97	10-May-15	Brown		Turnpike Bridge	Alex Lewis	18-Apr-15	Parryville Concrete
4	20-Apr-15	Rainbow	15.0	Triechlers	Joe Mazurek	12-Apr-15	Rope Swing Pull Off
6	20-Apr-15	Rainbow	15.0	Triechlers	Joe Mazurek	12-Apr-15	Rope Swing Pull Off
196	12-May-15	Rainbow		above 873 Bridge in the Gap	Paul Tyahla	9-May-15	873 Bridge
198	12-May-15	Rainbow		above 873 Bridge in the Gap	Paul Tyahla	9-May-15	873 Bridge

Tag Number	Reported Caught	Species	Size	Catch Location	Name	Date Stocked	Stocking Location
125	25-May-15	Rainbow	16.0	across from TP on 248	Randy Getz	18-Apr-15	DNL Trail 2
44	25-May-15	Rainbow	15.0	downstream Aquashicola	David Messinger	12-Apr-15	Access Ramp at 873 Bridge
98	25-May-15	Rainbow	16.0	below 895 bridge at end of rapids	Quinn Horn	18-Apr-15	Bowmanstown Bridge
134	29-May-15	Rainbow	17.5	8 miles north of JT train station, Bear Creel Area	John Martino	9-May-15	JT Train Station
152	30-May-15	Rainbow	15.0	Lehighton - Dunbar	Josh	9-May-15	Dunbar
37	31-May-15	Rainbow	19.5	1/8 mile upstream from 895 bridge Bowmanstown	Ed Wilkenson	12-Apr-15	Walnutport Ramp
174	31-May-15	Rainbow	13.0	1/2 mile upstream from 895 Bridge Bowmanstown	Jesse Strohl	9-May-15	Bomanstown Bridge
115	31-May-15	Brown	?	Between Bowmanstown and Walnutport boat ramp	Hunter Rausch	18-Apr-15	Bowmanstown Boat Ramp 2
157	31-May-15	Rainbow	16.0	Rock Hill	James Holler	9-May-15	Parryville
172	30-Jun-15			Across from RiverWaulk	Randy	9-May-15	Bomanstown Bridge
125	30-Jun-15			Musky Pool	Randy	18-Apr-15	DNL Trail 2
180	9-May-15	Rainbow		below Bowmanstown Island	Marty Williams	9-May-15	Palmerton
137	12-May-15	Brown		1.1 miles downstream JT train station per GPS	Matt Gesell	9-May-15	Packerton Dip
110	4-May-15	Brown		fast water above Lizard Creek	Leroy George	18-Apr-15	Bowmanstown Boat Ramp 1
71	9-May-15	Rainbow		behind Kovach car dealership	Herbert Gasker	18-Apr-15	P-town Lane stop 3
131	13-May-15	Rainbow	15.0	between old and new bridges in JT	Bob Murphy	9-May-15	JT Train Station
132	14-May-15	Rainbow	16.0	JT Train Station Beach	Ryan Scott	9-May-15	JT Train Station
129	14-May-15	Brown	18.0	New JT Bridge	Bob Murphy	9-May-15	JT Train Station
160	18-May-15	Rainbow	14.0	TP Bridge	Eric Kresge	9-May-15	Parryville
84	18-Apr-15	Rainbow	14.0	above TP Bridge	Jim Grower	18-Apr-15	Parryville
141	17-May-15	Rainbow	17.0	Dunbar Beach	Evan Weller	9-May-15	Packerton Dip
136	18-May-15	Brown		Packerton Dip	Ryan Scott	9-May-15	Packerton Dip
162	18-May-15	Brown		above TP Bridge	Greg Kovach	9-May-15	Parryville
194	19-May-15	Rainbow	14.0	below Aquashicola confluence	Evan Williamns	9-May-15	873 Bridge
62	21-May-15	Brown	18.0	near pumphouse at Packerton Dip	Mark Shanton	18-Apr-15	Packerton Dip

Bob Mauser with Rainbow caught and released at Lunkerfest