



February 2018

**Darby Creek Valley Association Annual Meeting
February 24, 2018 Haverford Community and Recreation Center
6000 Parkview Drive Haverford, PA 484 380-2730**



Presidents Pen

By DCVA President Jaclyn Rhoads

New Year, New Threats to Our Water Resources

From pipelines to oil drilling, our water resources are unfortunately at risk these days. Besides a pipeline that's been working its way through Delaware County just outside of the watershed over the past year, President Trump just issued a new directive to open up nearly all coastal waters to oil drilling. DCVA is committed to supporting our neighbors and the water they rely upon.

This new direction on oil drilling is outside of Congress' power and left to the discretion of the President and his agencies, but the public does have the opportunity to express its concerns, ask questions, and even protest if desired at public meetings scheduled in New York, New Jersey, Delaware, and Washington D.C. Written comments can also be

provided through to the end of March. More information can be found at this website – www.boem.gov/NP-Draft-Proposed-Program-2019-2024/.



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Regarding more local threats to our water resources, the PA Department of Environmental Protection is gathering comments on updates to water quality standards. The proposal addresses standards that apply to nutrients, bacteria, toxics, and chloride among other pollutants. In addition, DEP is seeking comments about a proposed definition for “conservation easement” that would apply to exceptional value designations that requires a governmental body to hold some kind of interest in easement. This proposal is a result of PA DEP’s triennial review. More information can be found here www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/Pages/default.aspx.

Speaking up matters. It is important that the public gets a say on how water resources are treated, so it is important to get as many people as possible making comments. If you need help or just have questions, DCVA is here to help. You can always reach us at our number 484-222-2502 or email me directly at president@dcva.org. We appreciate your help, and let’s give each other a hand!



NOMINATIONS COMMITTEE REPORT

By Jaclyn Rhoads, DCVA President

At our annual meeting on February 26, 2018 DCVA will be nominating Mary Westervelt as a new board member along with renewing board members whose terms have expired. The slate of returning members is:

Jamie Anderson	Robin Mann
David Bennett	Alan Samel
Jeannette Guess	Scott Maits

Jamie Anderson and Jeannette Guess will be nominated for their 2nd term on the board. David Bennett, Scotts Maits, Robin Mann and Alan Samel are long-time board members of DCVA that bring a wealth of experience and knowledge.

Mary Westervelt, new nominee, is from Tredyffrin Township, near the headwaters of the watershed. She is interested in helping to start an environmental advisory council in Easttown, and helped to create a rain garden at her church, Trinity Presbyterian Church, Berwyn, PA. Her article about the project with photographs appears in the fall 2017 issue of *The Valley*. Mary comes with a Master’s Degree in Environmental Studies from the University of Pennsylvania, and has a long work history with the University. She will be a great asset to DCVA.

The nominating committee for DCVA discussed potential additions and reviewed the renewing slate of members. The nominating committee included Jaclyn Rhoads, DCVA President, Kate Doms, Earl Wilson, Gerry Krieg, and David Bennett. Any individual interested in joining the board can contact DCVA at

president@dcva.org or at 484-222-2502.

Welcome to DCVA Director Susan Miller

We are very pleased to welcome Susan Miller as the Director of the Darby Creek Valley Association.

Susan has a Master's In Non-profit and Organizational Management from Eastern University and a bachelor's degree from L.I.U. Southampton College where she majored in biology and marine biology. She also has an associate degree in All Natural and Physical Sciences. After graduating from L.I.U. Southampton College she worked as a field technician for Geraghty and Miller Engineering cleaning up oil spills and pipe line leaks. She has also worked for NTH Soil as a soils/concrete lab technician and for Engineering Consulting Services as a lab manager and field technician. She moved on to medical research, and was the lab manager in a neurovirology research lab at Hahnemann University and the Wistar Institute. She decided to make a change and has run her own pet sitting business for the past 18 years. During this time she returned to her studies and received her Master's in Non-profit Management, Organization Leadership from Eastern University in 2011.



Susan has a great deal of experience as a volunteer and working with non-profit organizations. She was on the Broomall Rotary Board for eight years, and the president for one year. She was also a member of Marple's Environmental Advisory Board for about two years. Susan is a Naturals Lands Force of Nature Volunteer; she enjoys her work with them very much. She also helps out with pet rescue organizations.

Susan was originally hired part time to help DCVA with all of our administrative needs, but the position developed into one of greater responsibility and in October 2017 she was hired as the Director. She handles all administration, social media, website development, marketing, and much more.

Ann Jackson reports that Susan is..."herding the cats (that's DCVA members) into an organized, forward thinking group of volunteers. [Her] outreach (website, etc., and community involvement) has increased participation by new and "old" volunteers alike." **Welcome Susan!!**

2018 Darby Creek/Cobbs Creek Watershed Wide Cleanup

The Date for this year's annual Darby Creek/Cobbs Creek Watershed Wide Cleanup is Saturday April 14th, 2018. If any captains cannot make that date, we will accommodate them for a different date. We will be needing several substitute captains and more/fresh volunteers. Our Cleanup Committee this year is: David Bennett-Chair and producer, Sue Miller- Director, Gerry Krieg- technical details/cartography/brochure layout, and Jaclyn Rhoads President and fearless leader.

Contact David Bennett 610-626-1344, dster21@comcast.net to volunteer!!



The Insect identification Workshop was Huge Success!

By Alan Samel



We had our annual Insect Identification Workshop January 13, 2018 at the Haverford Reserve. The environmental room is a great place for us to set up and take a look at the samples we took from stream the past year on April 15, 2017. We also had lunch supplied by DCVA, too! Beautiful!! Many thanks to the folks who came out and made the Workshop a success. We had almost 30 very interested and motivated volunteers of all ages helping out. A DCVA Insect Identification Workshop record!

This insect identification workshop is not anywhere near as hard as it sounds. Yes, we use microscopes. Yes, the bugs are small. And yes, there is mud and twigs and leaves. But NO, it is not difficult. Heck, this year we had kids and even teenagers process samples collected! Yes, teenagers!! You know, almost adults with no attention span. Those teenagers. And they all did a great job.

The annual Stream Watch stream samples were collected April 15th. We took 10 samples; 2 from each of five sites up and down Darby Creek. Thanks to the small army of volunteers who helped make this a great day. It was a good day to get wet! It was overcast and about 50°F. Not a perfect day, but a good day to take stream samples. Samples were taken from five locations on Darby Creek: Bartram Park in Darby, Darby Creek Road in Havertown (downstream from the Haverford Reserve), Skunk Hollow in Radnor, the Brandywine Preserve at Waterloo Mills in Easttown, and the Swedish Cabin in Upper Darby.

The insects and bugs we collect provide a snapshot of the health of Darby Creek. This was the 13th year of intense sample collections and identifications. From this long-term sampling, a trend of the stream health at each site has been determined. Each year we compare our findings from the water quality determinations from the previous years. It's a way of getting the big picture from a lot of very small bugs! But getting into the stream and collecting the bugs is only part of the streamwatch program.

The next step was to identify the bugs pulled from the stream. We then can identify the level of water quality for that section of the creek. The purpose of the workshop is to identify the aquatic organisms taken in samples during the Stream Watch. The results provide an assessment of the water quality of Darby Creek at each site during that period of time will be assessed based on the organisms present during sampling.

The 2017 samples showed decreases in water quality at all sample sites. While we have seen down years followed by good years, and vice versa, a decline at all sites does get your attention (Figure 1). But one year does not tell the complete story; it will take sometimes 3 to 5 and possibly more years to determine if the water quality at specific sample site is increasing or decreasing. One year can be very different from the previous year, as we saw from the 2017 samples and the 2016 samples. The 2016 samples showed an increase in water quality at all locations except the location at the Swedish Cabin (Upper Darby). A trend that is revealing itself is a downward trend in water quality at the Swedish Cabin site in Upper Darby. This is the third consecutive year where the water quality has gone from a good water quality (2014) to poor water quality with the 2017 samples. We will monitor this site closely—this is what we do.

The next stream watch event, stream samples, is scheduled for this coming April 7th. Put it on your calendars! Watch for this article in the next Valley. If you are interested in getting involved with the stream watch program; stream samples and insect identification workshop, please contact me at alan.samel@gmail.com.

Volunteers at the 2018

Insect Identification Workshop

Photo by Susan Miller



Macroinvertebrate Analysis

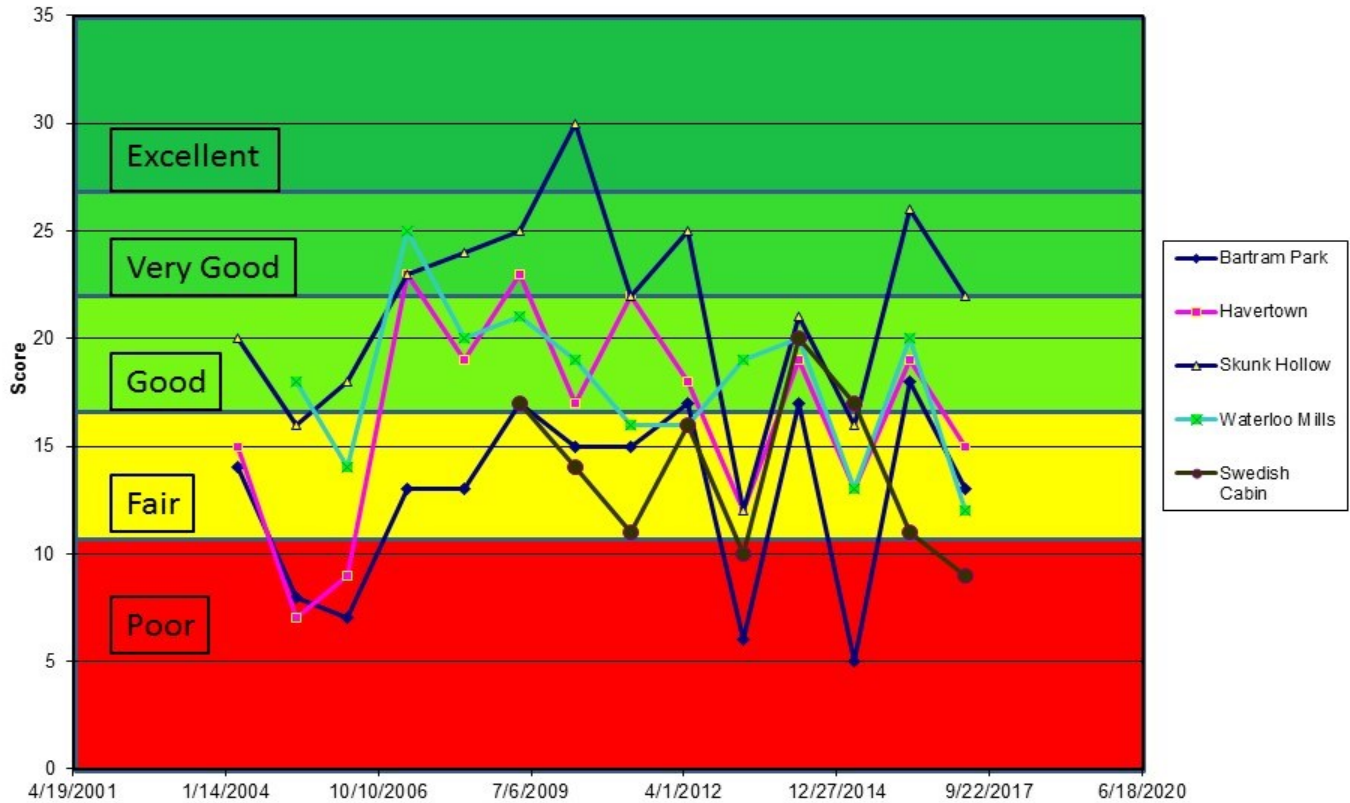


Figure 1. Macroinvertebrate analysis of stream water quality in the Darby Creek watershed from 2001 until 2017



Insect Identification Workshop January 2018

Top Left: Matt Moore (left), with Tim Devaney (center), and Rich Mooney (right).

Bottom left: Aurora Dizel, (left) Bob Scott (center) and Kate Doms (right).

Photos by Susan Miller

The Millerites

By John Haigis

Originally published on www.darbyhistory.com

One interesting sidelight in Darby history concerns followers of William Miller who, in 1843, published a prophecy in the *New York Herald* that the world would end in fire on a date certain. He came to this conclusion from his study of the Biblical books of Daniel and Revelations and even predicted that the event would occur on a particular date in April 1843. A meteor shower that year seemed to give credence to his prophecy and many people believed, and some, believing that the dead has first pick in heaven, committed suicide. When the world did not end, Miller announced that he had miscalculated and moved the date to July 7, 1843. When the world was still here on July 8, Miller again changed the date to March 21, 1844. Many Millerites sold everything they owned and gathered to await the end. It is reported that many Millerites were wearing "ascension robes" that had been sold by Mr. Miller. We need only think of "Jonestown" and "Heaven's Gate" to realize that such things are possible today.

When the world once more did not end, Miller moved the final date to October 22, 1844. People sold all their possessions and gathered once more to await the end. One report noted that a man brought along his ascension-robed cows stating "It's a very long trip, and the kids will want milk."

From the *Public Ledger* of Wednesday, October 22, 1844:

A part of these unfortunate and misguided people pitched their tents on Monday in a field belonging to Isaac Yocomb on the Darby Road about three and ½ miles from the Permanent Bridge. The first tent was erected about 12 o'clock. The converts continued increasing in the encampment all that day and night, males and females, some in omnibusses, carriages and on foot. Some of them threw away their property as they went along the street.

The first tent became so crowded that the children were forced into the open air without the proper care of their parents. These little ones were exposed to the pelting of the pitiless storm. Numbers of these children were running about the field crying for their mothers and fathers, and some even for food. Yesterday morning a second tent was erected, and the numbers had increased very greatly, the condition of these people is indeed anything but comfortable, and it must become worse from the want of proper food and other necessities of life, beside sleeping on the damp ground in this inclement season of the year, with scarcely enough clothing to cover them. It is feared that numbers will never leave the ground and those that do leave it, will do so with a scarce hope of recovery.

From the *Daily Sun*:

A considerable number of these persons encamped near Darby on Monday night, and yesterday morning many of them returned to their homes. During the night a number of wicked boys approached the encampment, and beat a gong which they had with them and blew a trumpet. The encampment, of course, was thrown into a state of alarm and confusion. We learn that several believers in the faith have had their eyes opened and now see the error which they have committed." Needless to say, the world did not end as predicted and the time has been called:

"The Great Disappointment".



The Impacts of Road Salt and other de-icing compounds on the Darby Creek Watershed and Preventing Salt Damage to Trees and Shrubs

Compiled by Carl DuPoldt

De-icing compounds include chloride-based deicers, acetate-based deicers, and carbohydrates.

Chloride-based de-icers: The chloride-based deicers discussed in this section are sodium chloride (NaCl), magnesium chloride (MgCl₂), and calcium chloride (CaCl₂). Deicers can enter into the environment during storage, transport, and application. When chloride deicers are dissolved in runoff, the anion and cation dissociate. The following section separately describes the environmental effects of anions (i.e. chloride) and cations (i.e. sodium, calcium, or magnesium).

Chloride: The chloride component of chloride-based deicers does not easily precipitate, is not biodegradable, Chloride is highly mobile and can impact the soil, vegetation, groundwater, surface water, and air.

Soil: Deicers reach the soil via runoff, splashing, spraying, or plowing. In general, chloride concentrations are the greatest within 6 to 9 feet from the road edge.

Vegetation: Roadside vegetation can be negatively impacted by absorption of chloride through the plant roots, or from accumulating on the foliage and branches.

Groundwater: Since chloride does not bind to soils, chlorides that enter the subsurface with infiltrating water may reach the groundwater table. Chloride entering groundwater systems is likely to persist for a long time since there is no significant removal mechanism and groundwater moves slowly.

Surface waters: Chloride concentrations in surface waters tend to follow a seasonal distribution. Concentrations usually increase in the winter and decrease in the summer.

Air: A small percentage of the total applied chloride is evidenced to be transported by air.

Sodium, magnesium, and calcium: The cation components of chloride-based deicers (i.e. sodium, magnesium, and calcium) can also impact the environment. Sodium ions can change the structure of soil, causing a decrease in permeability, and infiltration. Sodium can also reduce the amount of calcium, magnesium, and other nutrients in the soil by raising the alkalinity of the soil and reducing the ion exchange capacity.

Corrosion inhibitors: In order to reduce the corrosive effects of some of the chloride-based deicers, corrosion inhibitors can be added. Corrosion inhibitors can include heavy metals, inorganic ions, and organic substances.

Acetates: Much of the information on the environmental impacts of acetate-based deicers is based on studies regarding calcium-magnesium acetate (CMA).

Preventing Salt Injury to Trees and Shrubs: Every winter brings its annual a-salt on roads and walkways. In icy conditions, salt can be a good thing, but too much of it is worse than a bad pun. Cars, equipment, and concrete suffer in obvious ways, but damage to trees and other woody plants is much less invisible. Salt injures trees and shrubs by several means.

When road-salt spray hits twigs, buds and, in the case of evergreens, foliage, such direct contact causes yellowing of needles, and subsequent death of evergreen twigs and limbs. It also leads to stunted or deformed growth, such as “witches’ brooms,” on hardwoods. Severe or repeated direct exposure, especially for sensitive species like white pine, can kill the whole tree.

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Less noticeable, but worse by far, is the effect salt has on roots when it gets directly deposited onto a tree's root zone by plowing or when runoff washes salt into the soil. For an established tree, its root zone is two to three times its branch length (drip line). Enough salt in the soil will kill a tree over the course of a few years. But even at lower concentrations it makes water less available to tree roots, producing drought stress in the presence of moisture.

This latter, chronic injury may show up as browned leaf edges, a condition known as "marginal leaf scorch," in the hottest part of July and August, when deicing salt is the last thing on people's minds. It can also manifest as subtle, cumulative damage that weakens a tree year after year until eventually it succumbs to opportunistic agents such as insects or diseases. Many large old sugar maples throughout New England have fallen victim to cumulative stress, with road salt at or near the top of the list.

Salt actually damages soil structure, causing what's known as "sodium compaction." Roots need to get oxygen through soil pores, and healthy soil forms tiny clumps which form natural channels for air to pass. The chemical bonds holding the clumps together are broken by salt, and as a result the pore spaces collapse, restricting roots' access to air and further stressing trees. While it was once thought that rain could wash road salt out of the soil each summer, it now appears this is rarely the case, and that salt levels often slowly build over time.

There are many "low-salt recipes" for dealing with this problem. Some tree species—honey locust, hawthorn, and Norway maple, for example—are more salt-tolerant than average, and can be used in place of sensitive trees like sugar maple.

Homeowners can reduce salt damage by employing only sand or other mineral abrasives like "Sure-foot," or by at least switching to mixture of salt and sand. Alternative deicing products like calcium magnesium acetate (CMA) are much less toxic to plants, though they may cost more. In addition, constructing a barrier of burlap or other fabric to deflect road-salt spray from foliage can also help a great deal. Barriers to deflect and/or divert spring runoff from root areas can assist as well.

References:

Environmental impacts of road salt and other de-icing chemicals https://stormwater.pca.state.mn.us/index.php/Environmental_impacts_of_road_salt_and_other_de-icing_chemicals

What Happens to all the salt we dump on the roads? <https://www.smithsonianmag.com/science-nature/what-happens-to-all-the-salt-we-dump-on-the-roads-180948079/>

Cornell Cooperative Extension office.

EFFECTS OF DEICING MATERIALS ON NATURAL RESOURCES, VEHICLES, AND HIGHWAY INFRASTRUCTURE http://www.michigan.gov/documents/ch3-deice_51440_7.pdf

Review of Effects and Costs of Road De-icing with Recommendations for Winter Road Management in the Adirondack Park http://www.protectadks.org/wp-content/uploads/2010/12/Road_Deicing-1.pdf

<https://www.google.com/url?>

Parasites of Two Common Fishes of the Darby Creek Watershed

By Kathryn Goddard

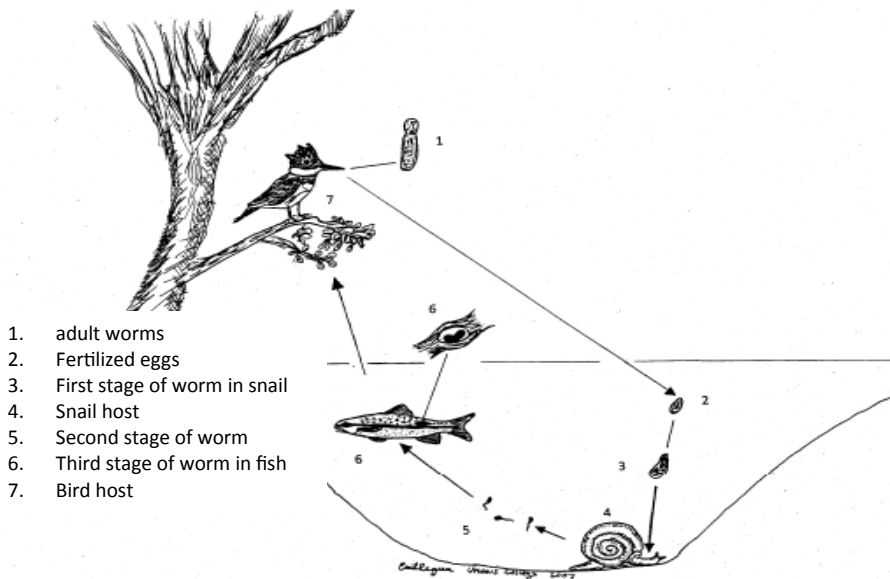
Fishes, like all other creatures

endure diseases and parasites. Common freshwater parasites in this area are the “black spot” flatworm parasite which gets its name from the fact that it causes a black pigmented spot on the skin of the fish. The “yellow grub” and “white grub” are tiny flatworm parasites found in the muscular and the interior of the fish respectively. Parasites in fish, and other creatures including humans, can often be tolerated if the individual is healthy and the number of parasites is small. If an individual is stressed by malnutrition or pollution, parasites may not be tolerated and the individual can sicken and die.

Parasites have fascinating and complex life cycles that can involve two or even three hosts or the life cycle cannot be completed. The figure below shows the life cycle of the black spot-adult worms in a fish eating bird drop eggs into the water that hatch and mature to a certain stage in snails. The partially mature worms exit the snail and embed in fish that they chance to encounter. The worm remains in the fish until the fish is eaten by a bird such as a kingfisher. The worms mature to the adult

stage in the bird and the cycle begins again. We studied the geographic distribution and abundance of five parasites in two common species of fish of the Darby Creek watershed- the blacknose dace *Rhinichthys atratulus* which live in all but the lowest part of the watershed, and the mummichog *Fundulus heteroclitus* which lives only in the lower watershed. *F. heteroclitus* is better known as a saltmarsh fish, so it is interesting that it is found in the Darby and Muckinipattis Creeks; it is known to live in fresh water in a number of geographical areas throughout its range. We found that parasitism appears to be negatively affected by urban development in that definitive (bird) hosts were less available for white grub, black-spot, yellow grub, and the round worm parasite called *Eustrongylides* sp. to complete their life cycles in some parts of the watershed. We found parasites called the “thorny headed worm” in both fish species in the lower watershed. High levels of the above named parasites were observed at two highly developed sites in the lower watershed. These sites are near or within the John Heinz National Wildlife Refuge where there are abundant bird hosts.

The pollution found in the area could be weakening the immune system of the fish, but none of the 400 individuals that we collected showed signs of tumors or malnutrition. In conclusion, the parasites in the lower watershed are a natural part of a complex aquatic community supported by the unique presence of the urban wildlife refuge.



Reference: Requa, E.R., Much, K., Bell, J., Bemis, K., Requa, L.C., Ordog, S., Chi, P. and Goddard, K., 2017. Geographic distribution of metazoan parasites of *Rhinichthys atratulus* and *Fundulus heteroclitus* throughout the suburban-urban watershed of Darby Creek, Pennsylvania. *Journal of the Pennsylvania Academy of Science*, 91(2), pp.112-133.

**This research was conducted under permits from the PA. Fish and Boat Commission and the John Heinz National Wildlife Ref-

To friends I have told the following story. It is tidal time I share thoroughly with 'Valley' readers of the Darby Creek Valley association.

Note: Memory pieces from this Cricker mostly relate to the secret sanctuary, once 'back of my back yard.' Particularly, a long-abandoned quarry, dry not flood based, which in my youth bustled as a sweet sanctuary of wildlife. There, often I watched a groundhog friend of Olympic award winner ability.

Had the groundhog of this article, made his home a few yards, ridge-over, he could have made his home, overlooking, silver-hem Darby Creek. That he didn't, he matched most residents of the Darby Creek watershed. Most do not live hug along the stream. In plotting this piece, I decided to add insights to my usual recited groundhog story. – Let us ponder together why friend groundhog chose to live where he did. Let us see where thought penetrated insights takes this Cricker; and you the readers.

Of brief lesson: Most groundhogs live with a main entrance encircled with a piled earth mound. Mr. Groundhog of recall, however, lived half way up, upon a stone wall. -- All other groundhogs I have observed, dug their main entrance hole using the same design practice. They dug their tunnel home on a flat or slightly undulating surface. Mr. Groundhog, of smile memory, however, nestled on a near perpendicular stony wall. This Cricker thinks Mr. Groundhog situated, on the wall side facing east, because he expected to be afforded early sun. Simply, his unique, high up home site was perfect for the catching of first rising sunrays. He reasoned rightly that placement for first sunshine would diminish night chilly air, in warm season. And would be especially helpful in frigid time.

Briefly, he chose to afford himself to direct first sunshine. On the other hand, err other paw, had he positioned just over the ridge – placing on the stream valley side – he would have gotten belated morning sun warmth.

Animal instinct favored direct sunshine over wrong side indirect sun. –That represents Animal Smarts.

Now my story:

Daily, friend groundhog made a descent of twenty feet to the quarry floor. When I could, I waited, with my eyes ready to narrow focus on him. Mr. Groundhog always earned my excitement, when he crouched in the manner of a human starter, ready for a foot race. By close observation, I watched for this. Watching, truly, I could see and feel him readying himself. In dash, readying mode his eyes trained on the stone wall. Mentally, physically he charged his resource energy. -- Of a sudden he pushed off and bounded with gusto. In the amazing doing, he headlong bustled upon the vertical face of the old quarry.

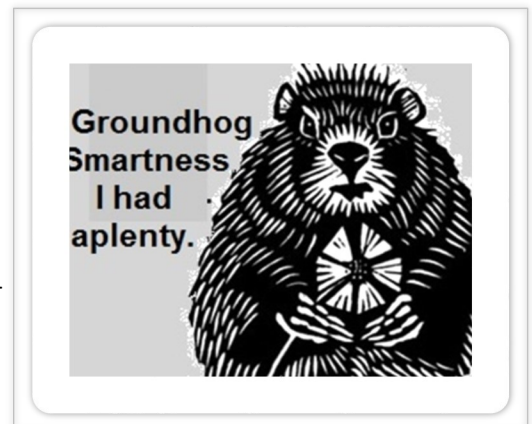
His home was an open cavity half way up stone wall. Up, Up, Up he weaved, a wee to the left, a little – need to right, onward, onward Upward. Upon reaching the wee cave cavity, he called home, he dove into it. Exhilarating, I never could watch without a sense of worry, of seeing him misstep. He never did.

Animal Olympian effort is the only way I can describe his daily feat. There runs more.

Animal instinct guided his choice of time to return home. Always, in good weather, soon after he returned home, he would brighten my face. I would smile over seeing him – cute furry face - front paws under his outstretched neck. To watch was to understand, life for him was grand.

His days were made of morning foraging, base of quarry sun bathing, watching, and feeling breezes upon his face, on his perch home condo. Had he lived later, I feel sure, he would have liked the mission of the Darby Creek Valley Association.

I close. Thank you for listening.



Why Early Darby?

Why, in 1743, Darby was Readily Fit to Found a Sustainable Library. Year 2018, Darby Library is Celebrating its 275th Birthday.

by

**Tom Roy Smith, a.k.a., John Pearson,
Darby's first Librarian**

The above title question, "Why Darby," though not a rhetorical one, does hold an import - part answer. -- Precisely due to the place's early settlement, Darby was given an 'edge up' of practicality. Creativity.

Fact, the site of future Darby claimed a settlement of Swedes in the 1660's. Swedes, as a people, stayed place put. The stayer-put Swedes intermarried with the first two generations of English, Darby settlers.

Hence: Darby's first English settlers had no need to scratch a living space. Two decades of hard-work, made Darby's layout - easy-work. The in-place head start lifted and carried forward, carried an 'edge up' powerful creativity. Particularly, a sustainable heady creativity. Of result, in short decades,

among them. Amongst locals, sadly, there were few books available to be shared. Hearing Philadelphians had founded a library, Darby citizens minded to found one of their own. -- Counted themselves - quite fit to do so.

What was small seat Darby's self-possessed advantage? Old settler seat Darby, had long earlier surmounted its infancy of 'subsistence living.' -- Scratch was a thing of the past; a process embattled and overcome by the seated Swedes. Darby became 'fit' to found a library by generations of preparation. Fit to found a self-sustainable library. -- Of all outskirts Philadelphia seats, Darby was best fitted to found a 'library.' The "Library" founded in Darby, in 1743, by modern back count tallies up as 275 Years Old. -- 1743-2018. I close. Thank you for listening.



Cricker's Corner author Tom Roy Smith and young local resident at the celebration of the 275th Birthday of Darby Borough Library. Tom Roy is dressed as John Pearson, Darby's first librarian.

JOIN THE DARBY CREEK VALLEY ASSOCIATION TODAY!

The Darby Creek Valley Association (DCVA) is dedicated to the protection and enhancement of all of the watershed's resources, including water, wildlife, historical sites, and the floodplains. The organizations immediate goals are to prevent all forms of pollution in the Darby Creek and its tributaries, to prohibit dumping and construction on the floodplain and to expand our educational programs for all residents within the watershed. It Also seeks to improve water quality and maintain a debris-free stream through clean-ups and public education. DCVA works to preserve historic properties, such as the Swedish Cabin and the Blue Bell Inn. The Association would like to set aside the more than 30 miles of valley for use as a greenway for all residents to enjoy. We need your support. Help us continue to protect the environment for ourselves and our children.

We invite you to fill in the form below, check member category, and mail form with your check to:

Darby Creek Valley Association, PO Box 732, Drexel Hill, PA 19026

Name: _____ Date: _____

Address: _____ City: _____ State: _____

Phone Number: _____ Email Address: _____

Individual member.....\$25	Family member.....\$35	Corporate or Municipality.....\$50
Senior Citizen or Student.....\$10	Non-Profit Group.....\$35	Life Member\$250

DCVA is a 501(c)(3) Non-Profit Organization-- All Donations are tax deductible to the fullest extent of the law.

CALENDAR

DCVA Board Meetings Third Saturday of each month Delaware County Peace Center
Annual MeetingSaturday February 24, 2018 Haverford Community and Recreation Center
9000 Parkview Drive, Haverford, PA
Annual Cleanup.....April 14, 2018 Darby Creek/Cobbs Creek Watershed Wide

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