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## *President's Message - Chet Dawson*

This is my fourth President's letter and last, as I will be completing my second and last terms as President this October. During that time our watershed has been stressed with new gas pipelines and several severe storms but remains as beautiful and vibrant as ever. Our Twin Walker Creeks Watershed Conservancy (TWCWC) Board of Directors has lost key members but has not lost any of its strength or desire to support the Twin and Walker Lakes community.

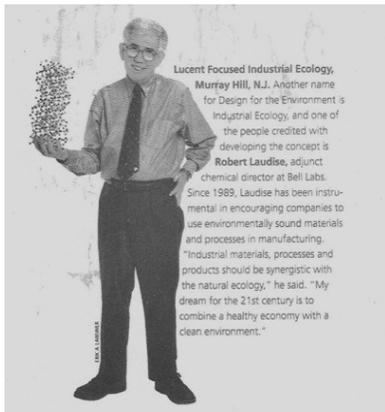
"The Joseph Messineo, Twin & Walker Creeks Watershed Conservancy Scholarship," to a graduating DVHS student planning to pursue a career in an environmentally related field is now in its third year and well established. We have added a new feature this year to our annual newsletter where we will recognize a current or former resident of the watershed who has made significant contributions to the environment. This year we are recognizing Bob Laudise, a former Big Twin Lake resident, whose contributions to the field of Industrial Ecology led to two International prizes named in his honor. Bob, a citizen scientist, along with his wife Joyce began the lake water testing that a few years later spawned the formation of the Twin & Walker Creek Watershed Conservancy.

TWCWC's main objective is the protection, understanding and education about our watershed. We provide educational pamphlets, an annual newsletter, stay in touch with regional activities, conduct lake testing from June to September and provide a speaker at our annual meeting on a topic that is of current interest. For instance, ticks are becoming an increasing problem in Pike County and on Oct. 24, 2015 TWCWC hosted a presentation on Tick Borne Diseases.

The mission of the Conservancy is to promote a better understanding of the Twin/Walker Creeks Watershed and its ecosystems and to protect, restore and enhance the watershed through proper management and watershed stewardship.

Our volunteers spend many hours in support of our objectives but we also have expenses to cover: maintenance of test equipment, lake water analysis, our educational efforts, publications and mailings and other ongoing activities. This past year our lake-testing probe needed to be replaced at a cost of almost \$3,000. You can help by donating to or joining TWCWC. A membership form is included with this newsletter. We welcome your suggestions and you are always welcome at our board meetings. To learn more, view our website at ([www.twcwc.com](http://www.twcwc.com))

## Bob Laudise Recognized Internationally - Joyce Laudise



Bob Laudise was at Bell Labs his entire career. Working with colleagues there he did research on quartz which led to the successful growth and manufacture of quartz that was superior in quality and cheaper than mined quartz. Quartz is used in making phones, electronic devices and even watches. He led groups that transferred optical- fiber technology to production and prepared some of the first crystals used to make lasers. In 1989 the International Organization for Crystal Growth designated its prize for experimental crystal growth the Laudise Prize.

When not working Bob enjoyed time spent outdoors and with his family. Swimming, sailing, hiking, biking and rowing were favorite family activities. All seven Laudise family members were overjoyed when they found a summer place on Big Twin Lake. Here Bob became keenly aware of the need to protect the environment as many Pocono Lakes were being damaged by acid rain and algal blooms were occurring with greater frequency. In 1987 he and his wife, Joyce, took up what the late William Miller, another chemist, had

begun in the 60's. They collected water samples, had them analyzed and wrote annual reports on the water quality of the two lakes. They also encouraged residents to properly maintain their septic systems, be aware of the damage pesticides and herbicides can do, and reduce runoff into the lakes; all in the interest of safeguarding the lakes and nearby surroundings.

Bob's interest in protecting the local environment carried over into his work where he became an early and strong advocate of corporate environmental responsibility. He brought Industrial Ecology or Design for the Environment to the attention of the U.S. Scientific and Engineering communities through projects at the National Academy of Engineering and the National Academy of Sciences. Since 2003 the International Society of Industrial Ecology awards the Robert Laudise Young Researcher Prize biennially for outstanding achievement in industrial ecology by a researcher under the age of 36. As Bob said in 1997, "My dream for the 21st century is to combine a healthy economy with a clean environment." Although he did not live to see the new century, work towards his dream continues by volunteers and professionals internationally and here in the Twin & Walker Creeks Watershed.

## Tick Borne Diseases - Barbara Whitney

Mikki Weiss and Marty Theys from the Pike Country Tick Borne Disease Task Force presented an Overview of Tick Borne Diseases to the Twin and Walker Creeks Watershed Conservancy. The objectives of the session was to understand that ticks may transmit multiple pathogens, to reduce the risk of tick borne disease by prevention, to motivate individuals to become an active participant in diagnosis and treatment and to facilitate a question and answer session.

Multiple Pathogens—A tick bite can potentially harbor diverse microbial pathogens. Here is a summary:

Pathogen	Disease
Anaplasma	Anaplasmosis
Babesia	Babesiosis
Bartonella	Bartonellosis
Borrelia burgdorferi	Lyme Disease
Borrlia miyamotoi	Relapsing Fever
Francisella tularensis	Tularemia
Rickettsia Rickettsii	Rocky Mountain Spotted Fever

Prevention—Walk in center of trail to avoid contact with grass and brush, Remove leaves, leaf litter and brush around lawns and houses, Remove plants that attract deer from homes, Perform frequent thorough tick checks, Wear light colored clothing, a hat and closed toe shoes. Tuck pants into socks. Wear a long sleeved shirt tucked into pants.

To repel ticks use products containing Deet for skin and Permethrin for clothes and gear. Follow label directions. Gear and pets should be checked before bringing into automobiles and home. When home, tumble clothes in dryer for 30 minutes to kill ticks.

Tick Removal - Bathe or shower as soon as possible after coming indoors (preferable within 2 hours). Tick bites are usually painless and you will need to do a full body check for them.

If you find a tick, carefully remove the tick with tweezers. Do not burn or use any substance to remove it. Bare hands should not be used to remove ticks due to the risk of exposure to the tick's fluids or feces. If gloves are not available, the finger should be shielded with a tissue or paper towel.

Grasp the tick close to skin with tweezers, pull the tick straight out. Do not twist or jerk the tick. Make sure you remove the entire tick. After the tick removal, use antiseptic on the wound and disinfect the tweezers. Be sure to wash hand thoroughly. Save the tick in sealed container. Send tick for testing by a qualified professional

If you have been bitten seek medical care.

Tick Testing - Because some ticks can harbor multiple-pathogens, it is critical to have the tick tested in order to diagnose pathogens. Once the pathogens have been diagnosed, the medical professional can select appropriate treatment.

NOTE: you can have your tick tested at the Northeast Wildlife DNA Laboratory at East Stroudsburg University.

ESU Wildlife DNA Laboratory Website://quantum.esu.edu/dna/links

Click on Tick Submission Form for instructions

For additional information please call - Tick Bite Hotline 570 503-6334, DNA Tick Test 570-422-7885

## *A threat to salamanders and other amphibians - Scott Rando*



This adult red-spotted newt is ready to be returned to the water after taking of swab and tissue samples. Red-spotted newts are the most common newts found in the watershed and elsewhere in the region. Many people have seen the terrestrial intermediate stage of this species, the bright orange Red Eft.

Since 2006, when white-nose syndrome first started affecting bats in New York State, people have become more aware of the threat that wildlife diseases pose on species in certain habitats. Steps were taken to restrict access to some known bat hibernacula in order to slow the spread of this fungal disease.

Now, another fungus pathogen has come to light that is threatening amphibians, especially salamanders. A fungus in Europe, *Batrachochytrium salamandrivorans*, has recently decimated the Dutch fire salamander in the Netherlands. There is a fear that the disease could be transported to the U.S. and other countries and cause severe population decline or worse of varied species of amphibians.

This past January the U.S. Fish and Wildlife Service has placed an interim ban on the importation and interstate transport of 201 separate species of salamanders. Many of these were imported for the pet trade from other countries. Any captive salamanders or other reptiles or amphibians of the pet-store variety should never be released into the wild. An exception would be if you caught a local salamander that hasn't shared a tank with any imported species and you wish to release it; take it back to where you found it and release it.

One third of the world's 600 plus species of salamanders are found in the U.S., and biologists in this and other countries are concerned that fungal diseases have the potential for the detriment of amphibian species diversity worldwide. To this end, Clarion University Biology Department faculty, the Mid-Atlantic Center for Herpetology and Conservation, and the Pennsylvania Amphibian and Reptile Survey are embarking on a study to investigate the distribution of three amphibian pathogens in the state of Pennsylvania. The project will involve taking non-lethal samples from about 750 Eastern red-spotted newts and is set to start this spring. The samples will be screened for three amphibian pathogens.

Red-spotted newts were chosen as the target species for this study because they are plentiful and easy to find. On capture in the field, a swab is taken from predetermined locations of the newt's skin, and a tiny tissue sample is taken from the top side of the tail fin, after which, the newt is returned to the water. The samples are kept frozen for later PCR analysis.

The results of this work will aid wildlife managers on any future conservation efforts for salamanders and other amphibians. The sight of a red eft or other salamander in the wild is a welcome sign of spring. Let's hope we keep seeing these small wonders.

## *2015 Water Quality Monitoring Report for Walker Lake, Twin Lake and Little Twin Lake - Peter L*

We have just received the results of our testing program for 2015 from F.X. Browne. As expected, results are very similar to those of prior years. All lakes are in the mesotrophic range with descending order of Little Twin Lake, Big Twin Lake and Walker Lake. Slight improvement was noted over 2014 for all.

We have been having problems with our probe for the past couple of years and this year it failed altogether and we needed to replace it. The probe automatically reads: dissolved oxygen, water temperature, pH, conductivity and total dissolved solids at depths down to about 25 ft. Conductivity and pH data were thrown out except for September when we had our new probe. Chlorophyll a and phosphorous are measured from water samples that we take and send to an outside lab. Chlorophyll a is an indicator of the amount of microscopic algae or phytoplankton in the lakes. Phytoplankton are at the bottom of the food chain and support the overall health of the fish population yet if you have too much it can lower the oxygen levels and kill off the fish.

All three lakes were in an acceptable range with Little Twin having the lowest and Walker Lake the highest reading. Phosphorous is a nutrient of life but too much will lead to large algae blooms and oxygen loss. All three lakes were typical for Pennsylvania lakes with Walker Lake the highest and Little Twin the lowest amount of phosphorous. The biggest difference we find in the three lakes is the change in temperature and oxygen levels as we go to lower depths. Both Walker and Big Twin lakes show significant temperature stratification as you go to lower depths, which is accompanied by a rapid drop off in oxygen. We don't see that for Little Twin Lake which is why it may be able to support a trout population.

Lake testing dates for 2016 will be the weekends of June 18th, July 16th, August 20th and September 17th. If anyone is interested in assisting with the testing or learning more about it, please contact Peter Loewrigkeit (154ploew@gmail).

## *Treasurer's Report - Irene DeVito*

I am happy to report that we are beginning the new season in financially good condition. All of our bills have been paid and we have \$3,900 in the checking account and a little over \$16,000 in the money market account.

That \$3,900 will go fast once we begin to pay our bills for the upcoming seasons. Our mission to protect, restore and enhance our watershed comes at a price. We hope that you will consider becoming a member this year if you are not one already or perhaps renewing a lapsed membership. No matter what you choose to do, we are always grateful for faithful membership, new membership or renewed membership as we work together to keep the waters with the watershed pristine. I hope that you will have a wonderful time this year, recreating on and in the waters of our beautiful lakes.

**The Twin/Walker Creeks Watershed Conservancy will be hosting a public meeting at the Walker Lake Clubhouse October 22 at 10 am. The topic of the meeting will be:**

**Pike County Wildlife through Photographs**

**The speaker will be Scott Rando, TWCWC Board member**

**Twin & Walker Creeks  
Watershed Conservancy**

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Individual (\$15) Family (\$25) or Student/Senior (\$10)      \$ \_\_\_\_\_

Additional Donation:      \$ \_\_\_\_\_

Volunteer Opportunities (please circle any areas that are of interest)

Lake monitoring   Education (Children, Brochures, Other)

New programs (please note if you would like to participate or just learn more through our education program)

Invasive plant identification & control      Macro-invertebrate stream testing      Other interests \_\_\_\_\_

Suggestions for TWCWC \_\_\_\_\_

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