

## THE CATALYST

### SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

**THIS MONTH'S MEETING:** 7 pm on Thursday 4/12/12 at Jennings Environmental Education Center, pizza and pop provided. 3/8/12 meeting attendance: J. Beaver, C. Denholm, M. Dunn, V. Kefeli, B. Kuban, C. Leininger, B. Lubold, S. Mastalski, F. Van Atta, J. Puskas

### Home Show Builds Plenty of Fun

120 vendors packed the Fairgrounds of Washington County on Saturday, March 24th and Sunday, March 25th for the 16th Annual Washington County Builders Association Home Show. **Shaun Busler, Ryan Mahony, and Margaret Dunn** met many new people and, in addition to the ceramics (visit the "Green Store" at [www.cleancreek.org](http://www.cleancreek.org)), shared information about the Ohio River Watershed Celebration to be held 9/27/12 as well as the basics about acid mine drainage and passive treatment. Hundreds of visitors perused the booths of a wide variety of vendors offering lots of services for the home. Lumber companies, remodeling companies, banks, heating and air conditioning businesses, home improvement businesses, outdoor services, and those involved in the sale of glass, mirrors, and windows were just some of the vendors on-hand for the home show.



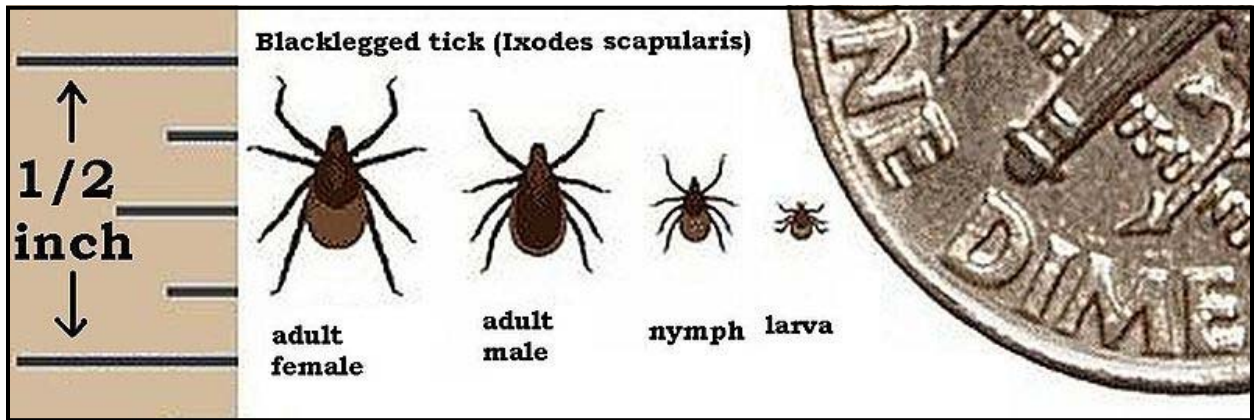
Shaun, Ryan, and Margaret learned much from chatting with the vendors who were very generous in sharing their knowledge! Special thanks to **Range Resources** for donation of table space and the **Washington County Builders Association** and the other sponsors: **Brookside Lumber, Bull International Incorporated, and Washington Financial.**

### Published Again!

#### SRWC's Dr. Valentin Kefeli — a New Book

#### Regenerative Cycles in Biomass Formation and Bio-Fuel Production

In conjunction with **Carnegie Mellon University**, a new book has been published by the collaborative efforts of several environmental professionals from three countries! Entitled Regenerative Cycles in Biomass Formation and Bio-Fuel Production, this recently published document was authored by **Valentin Kefeli, Shari Mastalski, Maria Kalevitch, Chris Leininger, Anatoli Kerzhentsev, and Abir Igamberdiev**. Edited by **Volker Hartkopf and Margaret Dunn**, the book focuses on the problem of the transformation of solar energy to the main processes of the biosphere. The book's main purpose is to analyze plant biological processes and soil activity as constituents of the regenerative cycles which cover plant propagation, biomass accumulation, and transformation of plant biomass for shelter construction and bio-fuels production. The book is unique in that it is based on experimental data covering the processes of photosynthesis, growth and differentiation in relation to biomass production, carbon dioxide consumption, and oxygen production by masses of green plants. Materials used in the experiments included fabricated soil which is used in plant propagation and landscape rehabilitation, as well as a substrate for leaf fermentation in biofuel production. Another facet of the book is a discussion of the role of human society. Humanity is considered as not only a consumer of nature's products, but also as a generator of new regenerative models for human activities using plant biomass sources. Soil fabrication and plant propagation are examined as the foundation of the exploration into bio-regenerative strategies for human activities as the basis for creating a sustainable society. Congratulations to Valentin and Margaret for the new book!



Taking note of the scale on the left, pictured here are forms a tick can have, depending on gender and life cycle stage. A dime is shown on the far right to provide size perspective. This year is predicted to be one of the worst in recent history for contracting Lyme disease. Be watchful for ticks when spending time outdoors, and read the article below for more information.

**Beware Ticks**

With the warm weather calling us all outdoors, we urge our readers to take precautions to protect yourself and your children from ticks and the Lyme disease they can transmit. Ticks have long been known to be carried by deer, but also are carried by mice, birds, and pretty much any animal. Ticks can be the size of the period at the end of this sentence. Not just Deer ticks transmit Lyme, all ticks can be carriers, as can other insects. Many people don't even notice a bite. Many of us would ignore a small black "dot" on us. Ticks can be black, brown or tan and found in your backyard, parks, forests, literally everywhere and in all 50 states.

Lyme disease, discovered only 30 years ago, is now the number one vector (insect) borne disease in the United States.



It is imperative to understand that Lyme disease is very real and can be disabling and can even kill in rare cases. If not treated promptly, appropriately, and aggressively it can become chronic and harder to treat. Because the immune system in patients with Lyme is usually impaired, untreated Lyme disease can eventually lead to other health issues.

Past common medical advice was to "look for a rash, flu-like symptoms, joint pain, and fatigue". These can be part of Lyme but not always — and there are over 100 other symptoms! Lyme does not manifest itself in exactly the same way in any two people. You can be bitten and not know it. Lyme disease can spread through your body, coming out one symptom at a time over years; or, symptoms can appear quickly. Lyme symptoms can mimic 200 other illnesses!

According to some sources, having a negative Lyme blood test does not necessarily mean that you don't have Lyme. If you suspect you could have Lyme, find a doctor that specializes in Lyme who can recommend additional tests and prescribe effective and individualized treatment. Lyme is still in its research infancy, and controversy abounds in the medical community over how best to treat Lyme disease and whether it can become chronic. If you are interested in learning more, the award-winning documentary "Under Our Skin" is quite an eye-opener.

We encourage our readers, especially those in the Butler County area, to be proactive in preventing tick bites by doing the following: wear light colored clothing when outdoors, tuck your pants into your socks, tuck your shirt into your pants, and wear a hat. Spray your shoes, socks, belt-line, collar and hat with a permethrin-containing tick repellent. DEET is not as effective. Do a tick check after walking in high-risk areas. Put any clothes that might have live ticks on them into a hot dryer for ten minutes to kill all insects.

According to some sources, if a tick is attached to your skin, use fine-tipped tweezers to grasp the tick's head. Pull it firmly and steadily straight out of the skin. Do not twist the tick or rock it from side to side. Put the tick into a sealed container or zip-lock bag to show a doctor if necessary at a later time. Do not use a hot match or petroleum jelly to kill or remove a tick. Wash your hands and the site of the bite with soap and water, then swab the skin with alcohol.

**For Additional information please check out these websites:**

- [www.lymediseaseassociation.org](http://www.lymediseaseassociation.org)
- [www.lymepa.org](http://www.lymepa.org)
- [www.ilads.org](http://www.ilads.org)
- [www.lymedisease.org](http://www.lymedisease.org)







Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated  
A PA Non-Profit Organization  
434 Spring Street Ext.  
Mars, PA 16046

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Thanks to The William & Frances Aloe Charitable Foundation, Environmentally Innovative Solutions, LLC, Dominion Peoples, Amerikohl Mining, Inc., Quality Aggregates Inc., Drs. Ron & Kathy Falk Family, BioMost, Inc., Allegheny Mineral Corporation and PA DEP for their support. For more information contact: Slippery Rock Watershed Coalition, c/o Stream Restoration Incorporated (PA non-profit), 434 Spring Street Ext., Mars, PA 16046 (724)776-0161, fax (724)776-0166, [sri@streamrestorationinc.org](mailto:sri@streamrestorationinc.org), [www.srwc.org](http://www.srwc.org). April distribution: 1176 copies

## Dr. Kefeli Enjoying Living Lab Lectures

The SRWC's resident soil scientist, **Dr. Valentin Kefeli**, is in the midst of teaching a lecture series to students at **Carnegie Mellon University**. During the months of February through April, Dr. Kefeli is leading two lectures at CMU's Margaret Morrison Hall (see photo below), one for graduate students and the other for undergrads. His graduate student class, on plants and architecture, features information on solar energy and its transformation; the relationship between photosynthesis and biomass accumulation and soil composition; and the conception of a green roof and urban agriculture. Lecture information includes specifics on renewable forms of energy, plant hormones, photosynthesis, green mass accumulation, leaves/wood/bark, layers of the atmosphere, fabricated soil, and much more.

The students in the undergrad class, with a focus on solar energy, are learning topics such as energy flow and transformation, population dynamics, urban agriculture and the green revolution, composting processes, plant growth and differentiation, the biosphere and its components, human activity and the noo-



sphere, fabricated soil use, the visible spectra and light quality, the ozone layer and biosphere protection, and solar energy transformation, among others.

Dr. Kefeli notes to his students that the ideas behind solar energy transformation were developed by an international society of scientists led by Russian Professor **M. Chailakhjan**. Dr. Kefeli was once his student and investigated processes of growth stimulation and growth inhibition. Dr. Kefeli dedicated these lectures to Professor Chailakhjan, and is very thankful to CMU for the opportunity to share his expertise through these lectures.