

# Canaltown Crier Rotary Club of Palmyra-Macedon 



Wed Jul 30, 2014

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## Club Events

No Upcoming Events

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Water Bears In Space
Posted by Tom Breen on Jul 23, 2014

Our own Mary Courtney, an Honorary Rotarian, spoke to the club today about a science project conceived by students of the Rochester Early College International High School (ECIHS), where she teaches. First, Mary gave us a small update on the school, which had its first graduation this year. Also this year, the school started a chapter of the National Honor Society. Normally, new members of NHS are inducted by current members, but as this was a new chapter, there were no current members. So, NHS members from Palmyra-Macedon came out to induct the new charter members. Mary was proud to have Pal-Mac NHS students do the inductions, as she was a member of NHS when she was a Pal-Mac student.

Mary then got into the meat of her program, which was to tell us about the school's involvement in the Student Spaceflight Experiment Program (SSEP). SSEP offers students from around the country the opportunity to test microgravity on a chemical, biological, or physical system aboard the International Space Station (ISS). Students develop proposals, detailing the experiment they would like to conduct and submit them through a two-stage review process. The proposals are evaluated locally and then nationally. ECIHS' proposal was one of only 11 selected nationally for this program.


Mary Courtney, center, with Colonel Miranda and PM Rotary President Bob Yost.
The principal investigators for this experiment were Cheyanne Jeffrey and Jo'ce Hill, along with co-investigator Cierra Cannon and collaborator Vicki-Ann Aman. They decided to conduct their experiment using microscopic organisms called Tardigrades, also known as "water bears." Tardigrades are extremophiles, organisms that can thrive in a physically or geochemically extreme condition that would be detrimental to most life on Earth. For example, tardigrades can withstand temperatures from just above absolute zero to well above the boiling point of water, pressures about six times greater than those found in the deepest ocean trenches, ionizing radiation at doses hundreds of times higher than the lethal dose for a human, and the vacuum of outer space. They can go without food or water for more than 10 years, drying out to the point where they are $3 \%$ or less water, only to rehydrate, forage, and reproduce. This drying out process is called cryptobiosis.

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The students' proposal focused on two experiments. The first would test to see whether rehydrated tardigrades in a microgravity environment had any structural and behavioral differences from the dehydrated tardigrades on Earth. The second experiment would be the same except with live tardigrades. The entire experiment would take place in two tubes, one-half inch in diameter, and about 8 inches long. The tubes are clamped off in two spots, creating three separate chambers. The first chamber would hold dormant tardigrades, the middle chamber would hold a wheat/water solution, and the third chamber would contain live tardigrades in a wheat/water solution.


There were two tubes - one was here on Earth at ECIHS and the other was sent to the space station. Students and astronauts were in contact and at the same time open the clamp between the first and middle sections of their tubes, allowing the dormant water bears access to the wheat/water solution and thus reviving them. At the end of the 6 week program, the tube from the space station was returned to Earth and eventually to the students in Rochester. The tardigrades in each tube were then compared. Chayanne and the other students presented their findings, along with the other 10 program researchers, at the Smithsonian Institution in Washington, DC.

All the students agreed that this was an exciting, challenging, and unique experience. These students had the chance to do "real science" and that doesn't happen to high school students every day.

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## Guests:

Mary Courtney, Colonel Miranda; Katie Read, Shirley Bassage, Autumn Sloan, Judene Pentergast (Margaret's daughter; visiting Rotarian Stacy Wicksall (Red Jacket); OB Student Bailey Cole; Mila Koziarska.

## Missing in Action:

Tom Brighton, Brian Brooks, Wayne Brophy, Marie Cramer, Cheryl Ford, Gary Haigh, Bob Ike, Debbie LeMoyne, Anne Morrell, Arnie Pechler, Dave Pray, Bob Sloan, Eric VanZeilen, Leslie Vecchiotti, Andy Wahl.

## Singing:

With our work for RL Concessions behind us, Kim led us in singing "Ding Dong! The Pageant's Done!"
Birthdays, Anniversaries:
Dave Read had a birthday on July 11.
Dave and Katie's anniversary (53) was July 22.
Nancy Schrader's birthday was July 14.
Fines, Happy Bucks, Confessions:

- Eric's son graduated from the Army's Leader Development Assessment Course (LDAC).
- Dave Stachnik had happy bucks in thanks to Joan and Cindy, who helped direct him in his first adventure with RL Concessions
- Vicky and Bob Daly went to Chicago to visit their son and brought back a grandchild to enjoy for a while.
- Kim offered thanks to Eric and Edie, who babysat their granddaughter while they managed at the Hill.
- Maurina had fun at the Hill, her first time helping out there.
- Cindy had a happy buck for the chance to say "Hi, Judy!" to Margaret's daughter; they went to school together and haven't seen each in other in years. Also, it was a good week at the Brickhouse with lots of visitors. She also told us that she has ended her career as a school bus driver.
- Dianne had a happy buck for Rory and Bob, who are away for 5 days of Boy Scout camp; she and Autumn went to Niagara Falls (Canada side) and had fun there. Also happy to see Mila again
- Mark wanted to thank Bob Yost for serving as committee chair of RL Concessions.
- Jim Bush offered thanks to the folks who stepped up and filled in for him at the Hill. Despite his best intentions when he signed up, he wasn't able to work his shifts.
- Pam had a happy buck "from the other side of the table."
- Gary happy-bucked for his daughter's travel lacrosse team, who made it to the championship match.


## Notes and Updates for the Club:

- The annual Rotary Day at the Red Wings is August 16. Details are available on the District website (click here). At last word, the club has 6 tickets available at $\$ 7.50$ each. If you are interested, please contact Bob Yost. If those seats are no longer available, the deadline to order is August 7.
- RL Concessions at Hill Cumorah is over, and early figures show revenue to be about the same as last year. - With the pageant over, it's time to start thinking about the Fair Booth. Kim will have sign-up sheets at upcoming meetings, and has emailed them to all members as they update. Thanks to all who have signed up already. Please try to sign up for at least 3 shifts if humanly possible. Do not be afraid of the manager shift you'll simply be helping out on the counter or wherever you're needed. You may also sign for incoming orders. Kim promises she will still open and close everyday!


Each year, with approval from the club's board of directors, the outgoing club president is able to present a President's Choice award to a project he or she deems worthy. Past President Pam selected the PalmyraMacedon Primary School's Weekend Wellness Backpack program, and is shown her presenting a check for $\$ 500$.

Shirley Bassage was the winner of this week's $50 / 50$ drawing, winning $\$ 13$. Congratulations, Shirley!
Next meeting - Noon, July 30 - Club Assembly at Parkwood Heights in Macedon.


[^0]:    July 23, 2014 - Meeting Minutes
    Posted by Tom Breen on Jul 23, 2014

