



"An organization of people in the Natural Sciences"

Note to librarians: The volume numbering of issues dated Oct. 2012 through Nov. 2013 was incorrect. Correct numbering resumes with the Dec. 2013 issue.

February, 2014 - Vol. 68, #2



PRESIDENT'S MESSAGE:

The winter solstice has passed and once again Sol is climbing higher in the sky. Even so, the temperature rise lags behind and the occasional blasts of arctic air remind us what winter weather can be like. Many of you have braved the brisk air to watch solar storms and starry skies, to catch and photograph sparkling crystals of mineral ice floating in the air, to identify trees without leaves, or to admire the birds you recorded during the annual bird count. Some of you were even seen having fun at the January Winterfest in Mendon Ponds Park!

To cap off the winter season, we have a "cool" treat in store for RAS Spring Lecture attendees. Dr. Vasilii Petrenko will share his adventures retrieving ice cores in Greenland and Antarctica and his research findings related to climate change. Details for this April 3rd event will be in the March Bulletin.



Whether you are enjoying your hobby indoors or outdoors, keep it up and have a happy winter season!

Jutta Dudley, President
Rochester Academy of Science

* * *

ASTRONOMY SECTION SUMMER CAMP, 2013

During the second week of August, the astronomy section of the RAS held its first annual Science Summer Camp! Seventeen children, four camp leaders and many adult helpers

made the event a huge success. Our campers spent the entire week at the Marian and Max Farash Center for Observational Astronomy learning about , telescopes, space, chemistry, biology, physics and more. Day one was mostly about telescopes and observing. Campers got an in depth tour of all seven of our observatories, and learned how to focus both our solar telescope and small optical telescopes. They also were able to look through a camera obscura, and build their own pinhole cameras. The cameras that the campers made are currently mounted at the Farash center,

imaging the path that the sun takes across the sky each day. The most exciting event of the day was making homemade ice cream after lunch. It was the best ice cream I've ever had!

Day two began with a lesson on hang gliding! Friends of the club set up a hang glider at the top of the observatory hill, and each camper had a chance to take silly pictures while strapped into the hang glider. The rest of the day was spent learning about chemistry and nature. Campers learned about crystal formation, and grew some large and small crystals of their own inside beakers. After a lesson on using a compass, the campers found their way to a small pond nearby, and collected water samples. Back at the observatory classroom, we placed these samples under a microscope, and discovered some mosquito larvae! The day concluded with the campers squishing up strawberries, extracting their DNA, and wearing it home in a necklace.

We began day three by learning about all the planets and objects in the solar system. The campers learned about the size and composition of each planet and their distance from the sun. Using a combination of dry ice, sand, and corn syrup, we created a semi-realistic comet that taught the campers about the composition of space rocks and how comets sublimate in outer space. Even the camp leaders learned something that day... if you put dry ice inside of a closed soda bottle, after about two minutes the pressure will build up

inside and cause a huge, startling explosion! The afternoon was spent learning about stars. The campers learned about the different sizes and temperatures of stars by lighting up their own "stars" with D batteries. They even used our own star, the sun, to roast marshmallows!

Day four was physics/blow-stuff-up day! Campers learned how to make their own campfire, and watched various combinations of fire and household chemicals cause explosions (safely, of course!). They learned all about how electricity and magnetism work, and made their own homopolar motors that spin small magnets on the end of a nail. Using all of the knowledge they gained at camp so far, the campers participated in a site-wide scavenger hunt for fun astronomy prizes, and made beautifully creative posters about their favorite astronomy topics.

The final day of camp focused on the mysteries of astronomy. Campers enjoyed looking at optical illusions, and learned how to classify galaxies based on their shape, size and color. We discussed the search for life beyond Earth, and campers built their own "Martian Landers". Their device had to hold a raw egg (scientific instruments) and protect them during a landing sequence (being tossed off a three story observatory). Almost all of the campers created a lander that kept their egg safely intact!

Aside from all the science, campers had a blast playing field games, football and riding a zip line. They even helped make their

own dinner over a campfire at the end of day two. A few campers truly camped overnight on Wednesday, and conducted some nighttime observing of the stars. Overall, camp was a huge success, and would not have been possible without our excellent camp leaders and parents/helpers from the club. Their efforts are much appreciated. It was such a success that most of our campers want to come back next year! If you have a child between the ages of 7-12 who might like to participate in camp next summer, please contact Carol Latta (cosmos@rochester.rr.com). More information will be available in early spring on our website:
RochesterAstronomy.org.

Valerie Rapson, President,
Astronomy Section

Events for February, 2014

For updates to events, check the Academy website, <http://www.rasny.org>, and Section websites.

FEBRUARY EVENTS

Tues 04 FOSSIL SECTION

7:30 p.m. Brighton Town Hall Auditorium (note room change). This meeting will feature Don Duggan-Hass and Rob Ross from PRI. The title of their timely talk will be: There's no such thing as a free megawatt: Hydrofracking as a gateway drug to energy and Earth system science literacy.

Fri 07 ASTRONOMY SECTION

7:00 p.m.–10:00 p.m. RIT, Gosnell Hall, Room A300. ASRAS General Members Meeting. Leslie Hebb will speak on a topic TBD. For more information, contact Valerie Rapson at 301-3424.

Sat 08 MINERAL SECTION

10:30 a.m. – 4:00 p.m. "Science Saturdays" at the Rochester Museum & Science Center, 657 East Ave, Rochester, NY 14607. We will meet in the lobby. Once again, our club will be demonstrating our Industrial, Local and Fluorescent Mineral Collections, giving away local specimens, running a slide show and talking about what our club has to offer. Your help is needed! Please volunteer to work a few hours (free museum admission!) by contacting Stephen Busschaert at mineralvp@rasny.org or 585-732-5321. <http://www.rmcs.org/Experiences/FamilyPrograms/sciencesaturdays>

Mon 10 ASTRONOMY SECTION BOARD MEETING

7:00 p.m.–10:00 p.m. U of R, Bausch & Lomb, Chart Room. ASRAS Board meeting. Contact Valerie

Rapson at 301-3424.

Sat 15 LIFE SCIENCES

10 pm. Winter Tree ID hike led by Ken Wolf. Rain or snow. Abraham Lincoln Park Empire Blvd, top of the hill just south of Plank Road. This is a new park with many children friendly apparatus and nature trails to explore. For more information, contact Karen Wolf at 670-9709.

Tue 18 MINERAL SECTION MEETING

7:00 p.m. - 9:00 p.m. at Brighton Town Hall, 2300 Elmwood Ave., Rochester, NY 14618. Our member, Fred Haynes, PhD, will speak on "**Minerals on Stamps.**" Door prizes & refreshments. For updates, check <http://www.rasny.org/mineral/> or contact Stephen Busschaert at mineralvp@rasny.org or 585-732-5321.

Wed 19 HERBARIUM

1:00 p.m. – 4:00 p.m. Life Sciences section will hold a workshop at the RAS Herbarium, located in the basement of the Rochester Museum and Science Center (RMSC). No experience needed! Plan to come and help with this valuable collection – and see some interesting plants! If you plan to attend, please send an RSVP to Elizabeth Pixley. Then, at RMSC, go to the front desk and ask staff person there to call ext. 368, the phone in the Herbarium. For more information, contact Elizabeth Pixley, herbarium curator (334-0977 or epixley@rochester.rr.com).

Fri 21 ASTRONOMY WINTER EDUCATION

SERIES

7:00 p.m.–10:00 p.m. RIT, Gosnell Hall, Room A300. Joel Schmid will speak on the topic of using Photoshop for processing astro photos. For more information, contact Valerie Rapson at 301-3424.

Sat 22 ASTRONOMY OPEN HOUSE

12:00-3:00 p.m. Open house at Ionia. For more information contact Bob McGovern (585) 381-7877.

Wed 26 RAS BOARD

7:00 p.m. Brighton Town Hall, Downstairs Meeting Room.

Thurs 27 ANTHROPOLOGY

7:30pm Memorial Art Gallery. We will join the AIA for their Lecture. "The Great Museum of the Sea" by Prof James Delgado, who has led or participated in shipwreck expeditions around the world. His undersea explorations include RMS *Titanic*, the discoveries of *Carpathia*, the notorious "ghost ship" *Mary Celeste*, as well as surveys of USS *Arizona*. Professor Delgado has published over 32 books and was the host of the National Geographic TV series *The Sea Hunters*. Reception following lecture. Contact Karen Wolf 670-9709.

ONGOING EVENT

ASRAS will operate the telescope, or one on the sidewalk, at Strasenburgh Planetarium on mostly clear Saturday nights. Contact Jim Seidewand at (585) 703-9876.

Rochester Academy of Science
P.O. Box 92642
Rochester, NY 14692-0642
 Return Service Requested

NON-PROFIT ORG.
 U.S. POSTAGE
PAID
 ROCHESTER, N.Y.

February, 2014 - Vol. 68, #2, Page 4

Note to librarians: The volume numbering of issues dated Oct. 2012 through Nov. 2013 was incorrect. Correct numbering resumes with the Dec. 2013 issue.

ABOUT THE ACADEMY - The Rochester Academy Of Science, Inc. is an organization that has been promoting interest in the natural sciences since 1881, with special focus on the western New York state region. Membership is open to anyone with an interest in science. Dues are minimal for the Academy and are listed in the membership application. Each Section also sets dues to cover Section-related publications and mailings.
 For applications and/or more information, contact Jutta Dudley, 140 Railroad Mills Road, Pittsford, NY 14534; by telephone (585) 385-2368; or by e-mail <pres@rasny.org>. The **Academy** Internet website is <http://www.rasny.org>
 Or see us on Facebook at <https://www.facebook.com/RochesterAcademyOfScience>

This “**BULLETIN**” is produced monthly, *except July and September*, by the **Astronomy Section, Rochester Academy of Science**. Submissions are due by the 10th of the month, and may be emailed to editor@rasny.org

ROCHESTER ACADEMY OF SCIENCE OFFICERS

		Phone	
		(585) home	work
Jutta Dudley	President	385-2368	
Jeff Gutterman	Vice President	392-8299	789-1364
Eric Drum	Secretary	216-9313	
William Hallahan	Treasurer	624-1628	389-2552
Open	Membership		
Stan Spector	Past President	461-1272	
Karen Wolf	Anthropology	670-9709	273-4500
Valerie Rapson	Astronomy	(cell) 301-3424	
Karen Wolf	Life Sciences	670-9709	273-4500
Dan Krisher	Fossil	293-9033	
Stephen Busshaert	Mineral	732-5321	
Elizabeth Pixley	Herbarium	334-0977	
Jutta Dudley	Publications	385-2368	
Bob Crumrine	<i>Bulletin</i> Editor	(cell) 813-4157	
William Hallahan	Student Grants	624-1628	389-2552
Paul Dudley	Website Coordinator	385-2368	
Reginald Smith	Director '16	244-4979	
Open	Director '16		
Frank Bov	Director '15	385-1518	422-9910
Douglas Kostyk	Director '14	943-3419	
Lee Tutt	Director '14	872-3033	
Helen D. Haller	Director '15	387-9570	

The Academy Postal address is P.O. Box 92642, Rochester, NY 14692