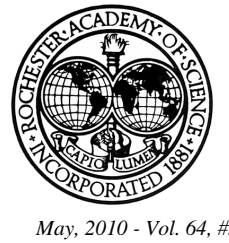


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BULLETIN

"An organization of people in the Natural Sciences"



May, 2010 - Vol. 64, #5

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ABOUT THE **ACADEMY** - The Rochester Academy Of Science, Inc. is an organization which 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 membership chairman Stephen Busschaert, 54 Keswick Rd., Rochester, NY 14609; by telephone 288-5683; or by e-mail <sbusschaert@msn.com>.

The *Academy* Internet web page is <http://www.rasny.org>

The *Astronomy Section* Information phone number is (585) 987-5330. The *Astronomy Section* Internet web page is <http://rochesterastronomy.org>

This "**BULLETIN**" is produced monthly, *except July and September*, by the *Astronomy Section, Rochester Academy of Science*. The editor is Bob Crumrine, 3 Timway Court, Fairport, NY 14450 Phone (585) 265-5292 (days) and (585) 425-7448 (evenings), e-mail <editor@rasny.org>

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PRESIDENT'S MESSAGE
THE IMPORTANCE OF
THE RAS WEBSITE

In recent months upgrades have been made to the website, RASNY.org. One of the commitments of the RAS board is to keep the calendar of events current on the website and to have the latest newsletter available on-line. This March, we saw the importance of our website.

The normal mailing of the bulletin with the calendar went out on time. Some of the members did get it delivered before the first of March. But other members did not get it until March 18. That is almost a 3-week spread on local delivery of the mail for different parties. We cannot count on prompt mail deliveries for information on RAS events.

I urge everyone to start using the website as their main method of event information and check into the calendar before the first of the month to get RAS events on your personal calendar.

Stan Spector, President RAS

SCIENCE EXPLORATION
DAYS 2010

For over three decades, Science Exploration Days has been providing enrichment opportunities for students in the Rochester area. Founded and organized by the Central Western Section of the Science Teachers Association of New York State (STANYS), the program brings together people from the community, industry and academia to share their scientific expertise and science-based technology with secondary students. Through seminars and a large exhibit hall, the young people become acquainted with research, scientific concepts, applied technology, local natural history, and various topics beyond the standard curriculum.

Hosting the event, since its inception, is St. John Fisher College. Presenters, exhibitors, and teachers with students will be welcomed on campus Wednesday May 13th and Thursday May 14th. Registered junior high students will attend from 9:30 AM to 1:00 PM on Wednesday, followed by the senior high students on Thursday. The public is invited to view the exhibits on Wednesday evening, between 7:00 and 9:00 PM.

The Rochester Academy of Science is an important presence at Science Exploration Days, especially in the exhibit hall. Hands on exhibits and informative displays by the Sections teach and enlighten visitors of all ages. It's an excellent opportunity for us to make the Academy known and to solicit new members.

You are encouraged to participate in this upcoming event by helping your Section prepare an educational, interactive exhibit. Please volunteer to provide materials or be present to engage with the visitors. Contact your Section Leader or Karen Wolf, who is the RAS liaison to the SED program. These people can provide you with more information.

Jutta Siefert Dudley
RAS Publications
President, STANYS

(Note: St. John Fisher College is located on East Ave. (Rt. 96) at Fairport Rd. (Rt. 31F))

ADK OUTDOOR EXPO
SATURDAY JUNE 12

9:00 AM to 4:00 PM at Mendon Ponds Park, Hundred Acre Pond beach area. Have you ever wanted to just try a canoe or kayak but

didn't know where to go? Have you ever wondered if there was a club with your outdoor interests? Here's your chance to find out! Join the members of several RAS Sections in sharing what we do, and finding out what other outdoor organizations have to offer. This event is free and open to the public. Contact your Section leadership to find out how you can participate.

ABSTRACTS FROM THE FALL 2009 SCIENTIFIC PAPER SESSION

ALIENS DISRUPT COMMUNITY DYNAMICS AT COBB'S HILL PARK IN ROCHESTER, NY.

Justin Rogers, Mark Norris
Department of Environmental Science and Biology, The College at Brockport 350 New Campus Drive Brockport, NY 14420

Invasive species have the potential to establish themselves as an ecosystem dominant. In this study, we characterized the current forest composition of the Washington Grove, a part of Cobb's Hill Park in Rochester, NY. This park is heavily used by many members of the community who may be contributing to an unnatural form of disturbance. Past research has demonstrated that disturbed habitat is more prone to exotic species invasion. Here, the nonnative but commonly planted landscape tree Norway maple (*Acer platanoides*) is present, and other previous research has found that this species can have a significant impact on the areas it inhabits. The Norway maple has been described as a prolific seed

producer, shade tolerant, and a strong competitor for limiting resources. Hypothesized was that the forest trajectory is shifting to a Norway maple dominated forest. In order to test this expectation, the forest was surveyed at random points along four parallel transects. At each point we systematically measured canopy and subcanopy trees, seedlings and saplings, herbaceous cover, and shrub cover. Discovered upon analysis of the collected data was that the canopy trees were dominated by native species including Red Oak (*Quercus rubra*), Black Cherry (*Prunus serotina*), White Oak (*Quercus alba*), Black Oak (*Quercus velutina*), and Sugar Maple (*Acer saccharum*). However, the Norway maple was the most dense and dominant in the subcanopy of the forest. Also found was that of the seedlings and saplings, this species was also the most dense. These findings provide an understanding of what we can expect of the forest composition in future generations. If this current trajectory continues one of our local forests will be dominated by a non-native, invasive species, which may have additional ecological consequences than just lost species diversity.

TOWARD THE CONSTRUCTION OF TETRAPODAL ARTIFICIAL TRANSCRIPTION FACTORS.

Christina E. Brule, Dr. Timm Knoerzer, José Luis Mascareñas².
(1) Department of Chemistry, Nazareth College of Rochester,

4245 East Avenue, Rochester, NY 14618, (2) Departamento de Química Orgánica y Unidad Asociada al C.S.I.C, Universidad de Santiago de Compostela, Santiago de Compostela 15706, Spain

Artificial transcription factors (ATFs) designed for multifunctional use must be capable of interacting with DNA binding domains in high specificity. The synthesis of such a system in which we exert complete control could serve to expand our knowledge of biological mechanisms and potentially find use as a preventative measure in the field of medicine. Herein, we describe a novel tetrapodal molecular architecture that can be developed into the next generation of artificial transcriptions factors. To achieve the target molecule, a bis-Michael addition reaction introduces the critical molecular theme. Subsequent hydrogenation followed by several peptide-coupling strategies and key deprotection reactions lead to a structure capable of incorporating mini-proteins. Finally, 1,3-dipolar cycloaddition chemistry leads us to the desired tetrapodal structure. Complete synthetic strategies and spectral characterization of proposed target molecule are described.

EVENTS for May, 2010

(For updates to events, check the Academy web site, <http://www.rasny.org>, or appropriate Section web site.)

MAY RAS EVENTS

Fri 07 ASTRONOMY GENERAL MEETING

7:30 PM, RIT Gosnell Hall A-300 Lecture Hall. Bob Piekiet from Marcellus NY will talk about "The History of Celestron and the development of the Schmidt-Cassegrain Telescope. For information, contact Lori Englund at 334-5744, or <lenglund@frontiernet.net> or visit www.rochesterastronomy.org.

Fri 07 FOSSIL GENERAL MEETING.

7:30 Multi-Purpose Room, Brighton Recreation Center (now called Brighton Senior Center) off Winton Rd., "The Devonian did not go out quietly," Professor Gordon Baird, SUNY Fredonia. Visitors welcome. Please email John Handley at fossil@rasny.org or call John at 585-802-8567 for more information.

Tues 11 LIFE SCIENCES GENERAL MEETING

6:00 PM. Karen Wolf's home 1397 Five Mile Line Road Penfield. Dish to pass dinner and preparing of the makings for the SED annual salad of edible weeds (plus lettuce and cabbage). Join us for this fun, working and educational meeting. We pick sheep sorrel, mints, oregano, chickweed, grape leaves etc, strip leaves from the stems and chop or cut for the salad. And how can I forget the violets! Karen Wolf 670-9709.

Fri 14 ASTRONOMY STAR PARTY

9:45 – 11:00 PM at Mendon Ponds scout camping area on Hopkins Point road. No need to bring equipment or a deep understanding; just come and enjoy the views. Dress very warm as evenings may be very chilly! For information, contact Jim Seidewand at 723-6225.

Tues 18 RAS NEWSLETTER DEADLINE

Deadline for events and articles the June-July, 2010 issue.

Tue 18 MINERAL GENERAL MEETING.

7:30 PM in the Downstairs Meeting Room of the Brighton Town Hall, 2300 Elmwood Avenue. Donald Lapham of the Buffalo Geological Society will give a talk entitled "Mineral Collecting at the Tucson Show." Members are encouraged to bring specimens to show that they have purchased at the Tucson Show, the Symposium, or other recent show. Door prizes & refreshments. Visitors welcome. For more information, Nancy McCann at mineralvp@rasny.org or (585) 395-1713.

Wed 19 RAS BOARD MEETING

7:00 PM Brighton Town Hall 2300 Elmwood Ave. in the downstairs conference room. Everyone is welcome.

Wed 19 HERBARIUM

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 learn about plants in the process. Lunch is served in the RMSC Cafe until 2 pm. If you plan to attend the workshop, 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).

MAY NON-RAS EVENTS

Wed/Thur 12/13. SCIENCE EXPLORATION DAYS

9:30 AM to 1:00 PM both days and 7:00 to 9:00 PM Wednesday at St. John Fisher College. Set up Tuesday evening and Wednesday and Thursday mornings. All RAS Sections will be participating. Volunteer with your Section to help. See the article on page 1 for more information or contact Karen Wolf at (585) 670-9709.