



President's Message



**Rochester Academy of Science
Annual Meeting & Spring Lecture**

**Wednesday, April 11, 7:15 p.m.
Brighton Town Hall, Community
Room**

The results of the election for the Board of Directors will be announced at the business meeting at 7:15 p.m. A ballot is included in this Bulletin on page 2. Please show us your support by returning the completed ballot at the annual meeting.

The Spring Lecture will follow the business meeting. We are delighted to have as our guest speaker, Dr. Jessica Cantlon who will share her research about the numeric abilities of primates.

Jutta Siefert Dudley, Ph. D.

President RAS

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***RAS 2018 Election
Ballot is on next page.***



Spring Lecture, Wednesday April 11, 2018

The Evolution and Development of Mathematics in the Human Brain.

**Presented by Jessica Cantlon,
Ph.D.**

In her talk, Dr. Cantlon will discuss the fundamental and universal perception of number in humans, its likely evolutionary homolog in non-human primates, its neural origin in humans, and its role in early childhood mathematics development.

Basic quantitative abilities are thought to have an innate basis in humans partly because the ability to discriminate quantities emerges early in child development. If humans and nonhuman primates share this developmentally primitive foundation of quantitative reasoning, then this ability should be present early in development across species and should emerge earlier in monkeys than in humans because monkeys mature faster than humans. We report that monkeys spontaneously make accurate quantity choices by 1 year of age in a task that human children begin to perform only at 2.5 to 3 years of age. Additionally, the quantitative sensitivity of infant monkeys is equal to that of the adult animals and that rates of learning do not differ between infant and adult animals. This

suggests that human quantitative reasoning shares its early developing foundation with other primates from factors related to genetic development as opposed to learning experience alone.

Source:

<https://www.ncbi.nlm.nih.gov/pubmed/26187058>

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About Our Speaker



Photo: Adam Fenester, UR

Jessica Cantlon is Associate Professor of Brain and Cognitive Sciences, at the University of Rochester. Dr. Cantlon studies the origins and development of mathematical cognition through comparative research of human and non-human primates, and developmental research on human children. Her research investigates the origins of mathematics using methods from cognitive science, educational testing, and brain imaging (functional magnetic resonance imaging, or fMRI).

Meet the Newest Director Candidates for the Academy Board

by Jutta Dudley

Anthony Golumbeck comes to us with a background in chemical engineering and a passion to expand his understanding of the universe. As an active ASRAS member since 2014 he learned to operate telescopes and contributes by giving talks and helping at summer camp. Tony also supports all-Academy events by attending the annual spring meeting/lecture and the Fall Scientific Paper Session. At the latter event, he says he enjoys engaging with the presenters about their research.

Tim Tatakis is a professor of biology at Monroe Community College where he has been teaching since 1989. He is active in the Life Sciences section and puts his talents to work as an avid volunteer in the herbarium. At a recent Fall Paper Session, Tim picked up the 1981 centennial issue of the RAS

Proceedings (v 14, n1 is now on our website) that covered the history of the Academy. Amazed by our rich history he resolved to do even more for the organization.

Mounted Plant Specimens Available!

by Elizabeth Pixley

During the “Big Sort” at the RAS Herbarium last year, we unearthed many nice pressed plant specimens with insufficient documentation to keep in the Herbarium. Many would be excellent for school reference collections, or they could be matted and framed for hanging in your home. If you are interested in looking through them, contact curator Elizabeth Pixley (334-0977 or eypixley@gmail.com). An example is shown here.



An anemone from the herbarium collection.

**ROCHESTER ACADEMY OF SCIENCE
BALLOT FOR JUNE 2018 – MAY 2019 OFFICERS**

OFFICE	NAME	√	WRITE-IN CANDIDATE
President:	Jutta Siefert Dudley, Ph.D.		
Vice President:	Michael Grenier		
Membership:	Open		
Treasurer:	William Hallahan, Ph.D.		
Secretary:	Helen Downs Haller, Ph.D.		
Member, Board of Directors (1 year remaining from the 2016-2019 term):	Anthony Golumbeck		
Member, Board of Directors (2018-2021):	Chris Collins, Ph.D.		
Member, Board of Directors (2018-2021):	Timothy Tatakis, Ph.D.		
Completed ballots delivered in person at the RAS Annual Meeting & Spring Lecture on April 11 or can be mailed to the RAS post office box: Rochester Academy of Science, PO Box 92642, Rochester NY 14692-0642			

Events for March 2018

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

2 Fri: ASTRONOMY SECTION MEETING

7 p.m. - 10 p.m. RIT Gosnell Hall Room A 300. Speaker: Brother Guy J. Consolmagno, SJ, is an American research astronomer, Jesuit religious brother, and Director of the Vatican Observatory. Snacks available at 7:00 p.m. prior to meeting. Contact: Mark Minarich: (585) 257-6042.

5 Mon: ASTRONOMY BOARD MEETING

7:00 p.m. University of Rochester, Bausch & Lomb Hall, 4th floor Chart Room. All ASRAS members are welcome. Contact Mark Minarich: (585) 257-6042.

6 Tues: FOSSIL SECTION MEETING

7:30 p.m. The Brighton Senior and Recreation Center located off Winton Road. Our speaker will be Nate Marshall who is in the Graduate Program at the University of Buffalo. He will be speaking on "Patterns of change in biomarker signatures support a linkage between graptolite and phytoplankton community changes". Contact: Dan Krisher: DLKFossil@gmail.com

9 Fri: ASTRONOMY SECTION WINTER LECTURE SERIES

7 p.m. - 9:30 p.m. RIT Gosnell Hall Room 3305. General Membership to discuss: "Extraordinary Astronomical Experiences They've Had." Snacks available at 7:00 p.m. prior to meeting. Contact: Mark Minarich: (585) 257-6042.

10 Sat: ASTRONOMY SECTION WINTER HOME INVASION

6:30 p.m. The Oyer Home: 56 Creekwood Dr, Rochester, NY 14626. Astronomy themed film and games; potluck supper. Contact: Mark Minarich: (585) 257-6042.

14 Wed: LIFE SCIENCES HERBARIUM WORKSHOP

1 p.m.- 4 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! We will be

organizing the Herbarium materials in our room, now that the basement construction at RMSC is completed. If you plan to attend, please send an RSVP to Elizabeth Pixley. At RMSC go to the front desk and ask staff person to call ext. 368 in the Herbarium. For more information, contact Elizabeth Pixley, herbarium curator (334-0977 or expixley@gmail.com).

16 Fri: ASTRONOMY SECTION WINTER LECTURE SERIES

7 p.m. - 9:30 p.m. RIT Gosnell Hall Room 3305. Speaker: RIT Senior Lecturer Dr. Brian Koberlein. Topic: "The Earth is Round and Other Lies: Misconceptions and Pseudoscience Spread Through Social Media". Snacks available at 7:00 p.m. prior to meeting. Contact: Mark Minarich: (585) 257-6042.

17 Sat: ASTRONOMY SECTION MESSIER MARATHON

6:00 p.m.- 12:00 a.m. Weather Permitting. Marian and Max Farash Center for Observational Astronomy, 8555 County Road 14 Ionia, NY 14475. Contact Mark Minarich: (585) 257-6042.

18 Sun: ASTRONOMY PUBLIC OPEN HOUSE

1:00 p.m. - 4:00 p.m. (or later, if skies are clear). Marian and Max Farash Center for Observational Astronomy, 8555 County Road 14 Ionia, NY 14475. Sledding, weather permitting. For weather related cancellations or changes contact Mark Minarich: (585) 257-6042 or see www.rochasterastronomy.org/calendar-of-events.

20 Tues: MINERAL SECTION MEETING

7:00 p.m. Brighton Recreation and Senior Center. 220 Idlewood Rd. Use entrance off Winton Rd to access back parking lot. Paul Cassarino of The Gem Lab will talk about dating jewelry based on discovery dates of gem materials and construction clues. Join us for an interesting talk, door prizes and refreshments. Contact: Stephen

Busschaert (585) 351-7633 or mineralvp@rasny.org.

21 Wed: RAS BOD MEETING

7:00 p.m. Home of H. Haller. 31 Park Forest Drive, Pittsford.

31 Sat: LIFE SCIENCES FIELD TRIP

10:00 a.m. Mendon Ponds Park. We will meet in Visitor Center parking lot. From there we will visit Wild Wings and view their raptor exhibits, and also do tree identification on one of the nearby nature trails. For directions contact Larry Hirsch 429-6199.

ONGOING EVENT

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

OUTSIDE RAS EVENTS

1-3 JUNE ALLEGANY NATURE PILGRIMAGE

Enjoy a weekend in Allegany State Park with nature enthusiasts of all ages. Speakers: "The Bird Chick" Sharon Stiteler and "Paleo Joe" Joe Kchodl. In its 60th year, the program is sponsored by several nature clubs in western NY and our local Burroughs Audubon Nature Club. For information go to www.alleganynaturepilgrimage.com. Act now to register a cabin or tent site.



*Welcome the Vernal Equinox!
March 20 12:15 p.m. EDT*

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CHANGING ADDRESS?

Temporary or Permanent?

Notify whallah3@naz.edu.

A returned newsletter costs us 50¢

Please help stop this waste.

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 online. Each Section also sets dues to cover Section-related publications and mailings.

For information, contact President Jutta Dudley at (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.

The Academy postal address is P.O. Box 92642, Rochester NY 14692-0642.

ROCHESTER ACADEMY OF SCIENCE CONTACTS

		(585) home // work
Jutta Dudley	President	385-2368
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