



President's Message



Renew Your Membership

Unless you are a Life Member, note that your membership will expire on December 31, 2025. Please renew your membership at your earliest convenience using the information on Page 4.

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Student Grants program

We have announced the 2025-2026 Student Grants program run by the Academy to all the local area colleges.

This past January, the Academy's Grants Committee awarded a total of \$5,750 for fifteen research projects. Funds for these grants come primarily from the Katherine H. Jensen Memorial Research Grant Fund, the Thomas F. & Annie A. and Grace Murray Memorial Research Grant Funds and the Student Grants Endowment Fund—which is where Life Membership payments go.

The maximum amount of each grant is \$700 for research, plus an unrestricted \$50 to the author of our top-rated submission. This is an important program for fostering scientific research and developing the next generation of scientists.

Our endowment funds can provide the money for seven of these grants. Any others we make will be funded with member donations. **I invite you to join me in contributing, however small, to the Rochester Academy of**

Science Student Grants program. No part of our annual dues is used to make these awards. We can only make additional awards with the donations made by members by PayPal on our website or check to the Academy address on the last page.

It was gratifying to see five of our 2025 grant winners presenting at the Paper Session. We will publish reports in upcoming issues of the *Bulletin* on some of these projects.

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2025 Scientific Paper Session

Our 51st annual Fall Scientific Paper Session on November 1st was a remarkable success. The SUNY Geneseo team, mostly from their biology department, were well-organized and executed every aspect of the event perfectly. I am grateful to team leader Dr. Kristina Hannam.

The leading purpose of the Rochester Academy of Science is and always has been to promote scientific study and research. We have many citizen science opportunities to serve our members. We provide numerous public outreach programs. However, our greatest contribution to the advancement of science is in nurturing young scientists and encouraging them to continue their careers in the sciences. The Annual Fall Scientific Paper Session is our flagship program in this objective. Many students have made their very first oral report or poster presentation on their research at this event.

We had over three hundred people attend, to see the 108 registered posters and hear the 42 oral presentations. Attendees came from 17 Upstate New York colleges and

universities – Buffalo State University, Cornell University, Hobart & William Smith Colleges, Houghton University, Ithaca College, Keuka College, Monroe Community College, Nazareth University, Niagara University, Rochester Institute of Technology, St. John Fisher University, SUNY Brockport, SUNY Buffalo, SUNY Geneseo, SUNY Oswego, Syracuse University, University of Rochester—and two high schools—Pittsford Sutherland and Victor.

It took the efforts of many Academy members to make this all work. We had to process the hundreds of attendees in under an hour at our registration tables. We had RAS outreach with our Publications and Fossil Section. Thank you to Jeff and Barb Gutterman, Douglas Kostyk, Dan Krisher, Jutta Dudley, Larry Hirsch, and John Handley for making this happen. Robert Crumrine sat in on talks and visited posters, talking with students and taking photographs. You will see the results in articles on student research in the next few Bulletins showcasing some research projects presented. Tim Tataakis recorded all the abstract fees—no small task. Our Annual Larry King Memorial Lecture keynote speaker was Dr. Mark Abrams. His talk on "**Native Americans, Smokey the Bear and the rise and fall of eastern oak forests**" was provocative and fascinating. We made the keynote talk the first program at the event and this led to a filled auditorium.

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Michael Grenier, President RAS

Events for December 2025, January 2026

DECEMBER, 2025 EVENTS:

NOT MEETING IN DECEMBER: Mineral, RAS Board.

Dec 5 Fri: Astronomy Members Meeting, Holiday Party

6:30 p.m. – 10:00 p.m. RMSC Strassenburgh Planetarium. Please bring an appetizer, dessert or beverage to pass. Contact Tony Golumbeck at President@rochesterastronomy.org for details.

Dec 10 Wed: Astronomy Board Meeting

7:00 pm – 9:00 pm. Farash Center. Members welcome to attend. For details, contact Tony Golumbeck at President@rochesterastronomy.org for details.

Dec 10 Wed: Herbarium

12:00 p.m. - 3:00 p.m. The Life Sciences section will hold a workshop at the RAS Herbarium, located in the basement of the Rochester Museum and Science Center (RMSC). We will be continuing to organize plant specimens in preparation for digitizing the collection. If you plan to attend, please send an RSVP to rasherbarium@gmail.com. At RMSC go to the front desk to meet other participants. For more information, contact herbarium curators, Tim Tatakis and Steven Daniel, by emailing rasherbarium@gmail.com.

Dec 9 Tues: Fossil Members Meeting

7:00 p.m. – 9:00 p.m. Note earlier time. Pittsford Community Center, room 019, 35 Lincoln Avenue Pittsford, NY 14534. The meeting is our annual Show-and-

Tell and Pizza party. The section will provide Pizza and drinks. Members are asked to bring some of their choice fossil finds from the past couple of years. For meeting details and login info see the FossilLetter or contact Michael Grenier at paleo@frontier.com. It will not be broadcast on Zoom. Children are welcome.

JANUARY, 2026 EVENTS.

Jan 7 Wed: Astronomy Board Meeting

7:00 pm – 9:00 pm. Farash Center. Members welcome to attend. Contact Tony Golumbeck at President@rochesterastronomy.org for details.

Jan 9 Fri: Astronomy Members Meeting

7:00 p.m. – 9:00 p.m. RIT, Carlson Building, Room 1125. Speaker: Vic Maris of StellarView who will speak about Refractors. For details, contact Tony Golumbeck at President@rochesterastronomy.org for details.

Jan 13 Tues: Fossil Members Meeting

7:00 p.m. – 9:00 p.m. The meeting will be held remotely via ZOOM and is open to all RAS Members and guests. Our featured speaker is Dr. Matthew Lamanna, Curator of Vertebrate Paleontology at the Carnegie Museum of Natural History in Pittsburgh. He will discuss Antarctic Late Cretaceous dinosaurs including the exciting bird fossils found there. For meeting details and login info see the January *FossilLetter* or contact Michael Grenier at paleo@frontiernet.net.

Jan 14 Wed: Herbarium

12:00 p.m. - 3:00 p.m. The Life Sciences section will hold a workshop at the RAS Herbarium, located in the basement of the Rochester Museum and Science Center (RMSC). We will be continuing to organize plant specimens in preparation for digitizing the collection. If you plan to attend, please send an RSVP to rasherbarium@gmail.com. At RMSC go to the front desk to meet other participants. For more information, contact herbarium curators, Tim Tatakis and Steven Daniel, by emailing rasherbarium@gmail.com.

Jan 21 Wed: RAS Board Meeting

7:00 p.m. - 9:00 p.m. Zoom only. For details, contact Michael Grenier at mgrenier@frontiernet.net.

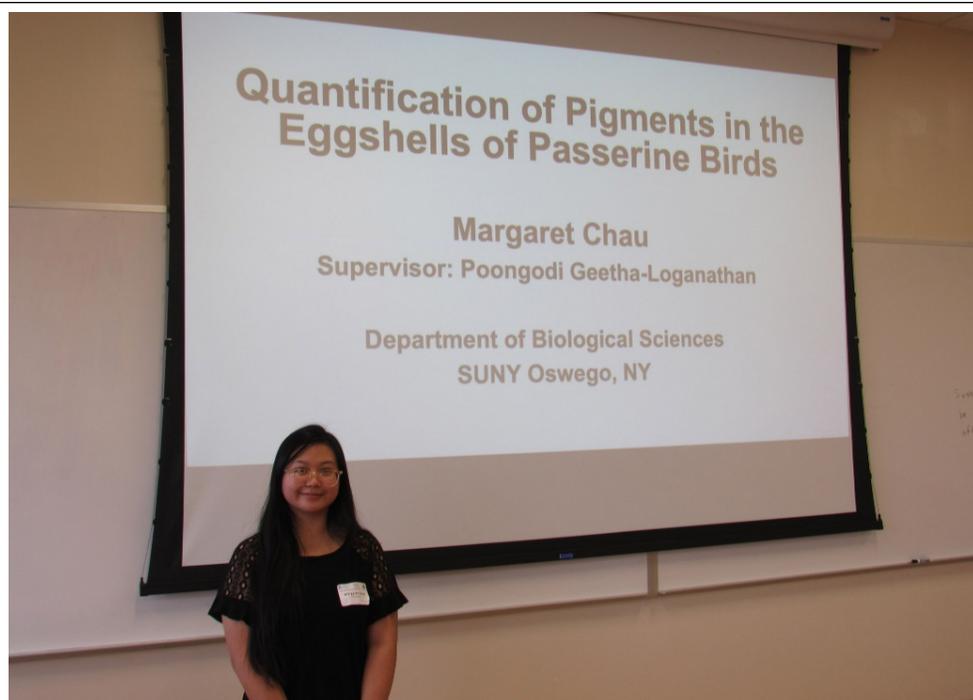
Jan 27 Tues: Mineral Section Meeting

7:00 p.m. – 9:00 p.m. Zoon only. Program to be determined. Members will receive more information in January. Guests welcome. Contact: Jutta Dudley, juttasd@aol.com.

STRASENBURGH OBSERVATORY:

ASRAS will operate the telescope at the Strassenburgh Planetarium on mostly clear Saturday nights, dusk until 10:30. For more information, contact: Jim Seidewand at (585) 703-9876.

OUTSIDE RAS EVENTS:



SUNY Oswego researcher Margaret Chau delivered an oral presentation and displayed a poster at the recent Fall Paper Session in Geneseo. Her abstract is below.

Abstract: Eggshell pigmentation in birds mediates light exposure for the developing embryo by modulating the thermal environment inside the egg. Pigments provide strength to the eggshell and are responsible for the egg's camouflaging property. The study aims to extract and analyze protoporphyrin and biliverdin pigments from the eggshells of Passeriformes perching bird species using high-performance liquid chromatography (HPLC) to quantify the color composition of the eggshell. Experiments were carried out using eggshells from unincubated (eggs from abandoned nests) and incubated eggs (from eggs collected and incubated in the lab, and from hatched nests). Eggshells were thoroughly cleaned with distilled water, rinsed with 70% ethanol, and air-dried in a fume hood overnight. Dried eggshells were stored in clean specimen bottles. Extraction of protoporphyrin and biliverdin pigments from the eggshells was done by homogenizing eggshell fragments with ethylenediaminetetraacetic acid

at pH 7.2. The homogenate was then processed to remove CO₂ and centrifuged at 15000g for 1 minute. The pellet was dissolved in acetic acid and acetonitrile. The solution was centrifuged again to obtain the pure extract, which was stored at 20°C in the dark. Standard curves were obtained using the biliverdin and protoporphyrin chemicals, confirming the measuring range of 5x10⁻⁶ M to 5x10⁻⁴ M. Samples were run at a flow rate of 1.5 mL/min, and a solvent gradient was used, with the total run time being 13 minutes. The initial mobile phase consisted of 25% methanol and 75% ammonium acetate, and a linear change to 95% methanol and 5% ammonium acetate at the 8-minute mark was maintained in this state for 2 minutes before returning to the initial conditions. The amounts of eluted biliverdin and protoporphyrin IX were analyzed at the absorbance 377 nm and 405 nm to quantify the concentration of pigments. Comparing the eggshell

properties of the Passeriformes birds will provide extended information about the habits, habitats, possible predators, adaptation to habitat, and development of the bird species belonging to eleven families of Passeriformes.



One of the birds whose eggs were studied is the open woodland nesting warbler American Redstart, *Setophaga ruticilla*, above, with eggs below.



Other bird eggs included were those of the Brown-headed Cowbird *Molothrus ater*, the Northern Cardinal *Cardinalis cardinalis*, the Gray Catbird *Dumetella carolinensis* (below), and the American Robin *Turdus migratorius*.



Above three photos courtesy of Cornell Lab
<https://birdsoftheworld.org>

Renew Your Membership

Unless you are a Life Member, note that your membership will expire on December 31, 2025. Please renew your membership at your earliest convenience. Please use the link or QR code below to renew your membership online with a credit card. Note: This link directs you to the Astronomy Section, but all RAS renewals can be transacted here.

<https://www.rochesterastronomy.org/2026-asras-membership-form/>



If you prefer to renew by check, use the enclosed membership form or this link to renew. <https://rasny.org/how-to-join>

2026 Rochester Academy of Science, Inc.

Membership Form Mail to: Rochester Academy of Science Attn: Treasurer P O Box 92642 Rochester, NY 14692-0642 <input type="checkbox"/> New <input type="checkbox"/> Renewal		Name _____ E-mail _____ Street _____ Phone _____ City _____ State _____ ZIP _____					
For your convenience, please pay your dues to the R.A.S. and its sections with a single check. Make check payable to: Rochester Academy of Science or pay at https://rasny.org/how-to-join (bottom of page) with PayPal, Credit or Debit Card.		CIRCLE the amount you are paying for an Academy category (shaded column) and for the Section(s) in which you wish membership.					
Membership Categories <i>R.A.S. dues are a prerequisite for section membership</i>	Rochester Academy of Science	Anthropology Section	Astronomy Section	Life Sciences Section	Fossil Section	Mineral Section	Total
Member (Individual over age 18)	\$10.00	\$2.00	\$25.00	\$2.00	\$10.00	\$5.00	
Family (Including students to age 18)	\$15.00	\$3.00	\$30.00	\$3.00	\$10.00	\$6.00	
Student (Through full-time undergrad.)	\$5.00	\$1.00	\$5.00	\$1.00	\$5.00	\$2.00	
Supporting (Individual or family)	\$20.00	*****	\$40.00	\$10.00	\$20.00	\$10.00	
Patron (Individual or family)	\$30.00	*****	\$50.00	\$20.00	\$30.00	\$20.00	
Life (Individual only)	\$200.00	*****	\$300.00	\$40.00	*****	*****	
Gift (Thank you!) Fill in amount ⇨							
If you are away part of the year, please indicate the months:							

RAS Member Images



Stephan's Quintet. Pat Cosgrove, Oct. 29, 2025.



Titan Transit of Saturn. Kevin Lyons on the Melior Refractor at Ionia. Nov. 23, 2025.

Rochester Research in Review.

(These are Hot Links which when clicked lead to the press release on the Science Daily and other science websites.)

[Scientists uncover hidden atomic process that supercharges propylene production. University of Rochester; November 14, 2025.](#)

[The five great forests that keep North America's birds alive. Cornell University; November 22, 2025](#)

[A surprising CBD advance calms pain without side effects. University of Rochester; November 18, 2025](#)

[How to keep Ozempic/Wegovy weight loss without the nausea. University at Buffalo; November 18, 2025.](#)

[A pink bumpy snailfish was just discovered miles beneath the ocean. September 26, 2025; SUNY Geneseo.](#)



This *Allosaurus fragilis* lived 155 to 145 million years ago during the Late Jurassic period in western North America's Morrison Formation. Some specimens have been found in Portugal, implying that it also lived in what is now New York. This specimen (AMNH 5763) was found in 1879, is mostly complete, and is one of over sixty known. It was the most abundant large predator of the Morrison Formation and probably preyed on large herbivorous dinosaurs. It is shown here as though feeding on an *Apatosaurus*. Photo: Michael Grenier, Nov. 1, 2025.

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. We are recognized as a 501(c)3 organization.

For information, contact President Michael Grenier at (585) 671-8738 or by email paleo@frontier.com.

The Academy Internet website is <http://www.rasny.org> or see us on Facebook at <https://www.facebook.com/Rochester-Academy-of-Science-792700687474549>.

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