



President's Message

Best Wishes for the New Year!

As the calendar turns to yet another year, we begin our outreach activities at the Mendon Ponds Winterfest on Sunday, January 13. If you've been to this event before you know it's a great family outing bringing together outdoor enthusiasts from a variety of community organizations. For our part, we'll showcase rock collecting and sky observing to the many curious visitors that stop by.

2019 will, no doubt, be another busy and interesting year for the Academy members. I hope during the year you find pleasure and satisfaction in learning, teaching, sharing, and volunteering in our community of natural history enthusiasts!

Jutta Siefert Dudley

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Nominations for RAS Board of Directors being Finalized

The Nominations Committee (Alex Smith, Tim Tatakis, Chris Collins) is presenting a slate of candidates for office at the January 16, 2019 BOD meeting.

If you are interested in running for a position (and are not already endorsed by the committee and on the slate) the bylaws allow you to be placed on the ballot. This is done with a petition signed by ten endorsing members to Secretary

Helen Haller by February 1. Include a brief sketch of your qualifications and desire to serve. All officer positions (1 year term) and two directorships (3 year terms) are up for election each year.

A ballot will be provided in the March RAS Bulletin, a month prior to the Annual Meeting, when ballots are tabulated and the results are announced.

Sardinia: Megalithic Prehistory, Sea Peoples, and Modern Identities, Part I

Sardinia is the second largest island in the Mediterranean, located on the western edge of the Tyrrhenian Sea. Despite being part of Italy, Sardinians speak Sardo, a language that has more similarities to Catalan and Latin than it does to Italian.

Sardinia's local identity is steeped in its ancient history, which is filled with megalithic structures and folktales of defiant heroes fighting for independence from empires and nations. The island was most likely inhabited by the Late Paleolithic (possibly as early as 20,000 years ago) according to recent research, developing island-specific cultural idiosyncrasies into the Neolithic (around 7,000-8,000 years ago for Sardinia). Some of these early megalithic structures include grave markers, known as *tombe*

grave markers, known as *tombe dei giganti* (tombs of the giants), exhibiting large, semi-circular blocks denoting the burial of important members of society and their families. Another common grave form of the late Neolithic are small, artificial caves built into bedrock outcrops known as *domus de janas* (or house of fairies).

During the Bronze Age (roughly 1800-900 B.C.E.), the island-wide indigenous culture, known as the Nuragic people, emerged and began building megalithic monuments throughout the landscape. These massive structures are known as *nuragi* (or the singular *nuraghe*) and can be found throughout the entire island. There are about 7,000 of these structures on the island. These *nuragi* can be dozens of feet tall, or no larger than a small rock cairn. The larger *nuragi* were used as settlement centers from about 1400 B.C.E. on, often used continuously into the first millennium C.E. by Phoenician, Carthaginian, and Roman era communities.

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Not all of these sites are the same, nor are their exact functions entirely understood.

The Bronze Age in Sardinia is also well-known for the small *bronzetti*, or bronze warrior statues that were produced on the island. These unique works of art were made between 1200 and 700 B.C.E., extending into the Iron Age of the island. As with the example pictured here, these small figurines represent indigenous warriors and can be found in well sanctuaries, around *nuragi*, and in tombs on Sardinia. These warrior statues have even been found in



Etruscan tombs of Central Italy. The statues highlight a culture that potentially worshipped their military prowess. To many, Sardinia is also known as the possible home of the “Sea-Peoples,” a group of organized marauders that wreaked havoc on the Eastern Mediterranean cultures of New Kingdom Egypt and the Hittite Empire in the 12th century B.C.E. The “Sea-Peoples” are considered one of the underlying forces of what is known as the Bronze Age Collapse. From the 13th to 12th centuries B.C.E., the Eastern Mediterranean witnessed a dramatic decline in trade, political instability, environmental change and widespread piracy (via the “Sea-Peoples”) which led to the end of a unified Egypt, the dissolution of the Hittite Empire, and the eventual decline of the

Mycenaean world. One of the largest groups of these sea people were known as the “**Sherden.**” Scholars have claimed that this name represents a linguistic connection to the place name Sardinia. Some ancient authors identify Sardinia as the origin of sea-raids to Crete during this time-period as well, lending further credence to this claim. Still, the name Sardinia remains of ambiguous origin, first appearing on the Nora Stone much later on in the 9th-8th century B.C.E. as *Šrdn*. With no clear answers, scholars will continue to debate Sardinia’s involvement in the “Sea-Peoples,” as well as the nature of this group of pirates in antiquity.

Author Dr. Alexander Smith, is Leader of the RAS Anthropology Section and Assoc. Professor at The College at Brockport.

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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**

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Membership Categories

R.A.S. dues are a prerequisite for section membership

	Rochester Academy of Science	Anthropology Section	Astronomy Section	Life Sciences Section	Fossil Section	Mineral Section	Total
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Life (Individual only)	\$200.00	*****	\$300.00	\$40.00	*****	*****	

Events for January 2019

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

NO FOSSIL MEETING IN JANUARY

4 Fri: ASTRONOMY SECTION MEETING

7:30 p.m.–10:00 p.m. RIT Carlson Center for Imaging Science, CAR-1125. Lot F. Speaker: Dr. Richard O'Shaughnessy, RIT. Topic: Discovering Gravitational Waves – Part II. Snacks available at 7:00 p.m. prior to meeting. Contact: Mark Minarich: (585) 257-6042.

7 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.

13 Sun: LIFE SCIENCES FIELD TRIP

11:00 a.m. Mendon Ponds Park, Winterfest Event. We will meet in the Visitor Center parking lot. From there we will visit Wild Wings and natural science activities in the park. For directions contact: Larry Hirsch 429-6199.

15 Tues: MINERAL SECTON MEETING

7:00 p.m. Brighton Town Hall, downstairs meeting room. Fred Haynes will present “Mining in New York State: Then and Now.” Our state has provided important geologic resources and products for well over 300 years. You’ll learn about these materials and their significance historically as well as today. Door prizes and refreshments. Contact: Stephen Busschaert, (585) 351-7633.

18 Fri: ASTRONOMY SECTION UR LABORATORY FOR LASER ENERGETICS TOUR

6:00 p.m. 250 E River Rd, Rochester, NY 14623. Number of participants limited. MUST be a US citizen. Contact: Mark Minarich: (585) 257-6042.

19 Sat: LIFE SCIENCE HERBARIUM WORKSHOP

10-2 pm. Basement Rochester Museum and Science Center (RMSC). No experience needed! Bring a lunch or buy it at the RMSC Café. If you plan to attend, please send an RSVP to Elizabeth Pixley. Meet by RMSC front desk. If you miss us, ask staff person to call ext. 368 in the Herbarium. Contact: Elizabeth Pixley, herbarium curator (334-0977 or eypixley@gmail.com).

20 Sun: ASTRONOMY PUBLIC OPEN HOUSE

12:00 p.m. - 4:00 p.m. (or later, if skies are clear). Marian and Max Farash Center for Observational Astronomy, 8355 County Road 14 Ionia, NY 14475. Sledding, weather permitting. Total Lunar Eclipse at 12:12am early Monday morning. For weather related cancellations or changes contact Mark Minarich: (585) 257-6042 or see www.rocheasterastronomy.org/calendar-of-events.

23 Wed: RAS BOD MEETING

7:00 p.m. Brighton Town Hall, Stage Conference Room

ONGOING EVENTS

STRASENBURGH OBSERVATORY

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

ASTRONOMY STAR PARTY

ASRAS hosts public outdoor star parties once a month on Fridays, either at Mendon Ponds Park or Northampton Park near Brockport. Notices are posted on the prior Wednesday at the ASRAS Facebook page, and www.rocheasterastronomy.org/calendar-of-events, or, contact Jim Seidewand, (585) 703-9876.

OTHER EVENTS

13 Sun: WINTERFEST

11:00 a.m. to 3:00 p.m. Mendon Ponds Park. Join the community at the County’s Annual Winterfest at Mendon Ponds Park. Enjoy hiking, racing, geocaching, ride a wagon, watch sled dogs run, meet wild critters, a patrol dog and horse, plus much more! See: <https://www2.monroecounty.gov/parks-winterfest>. Don’t forget, we’d like your help at the Astronomy, Fossil, and Mineral booths. We’ll be in the Cobblestone House.

20 Sun- 22 Mon : TOTAL LUNAR ECLIPSE:

Begins 21 hrs:36 min Sunday evening, Jan 20. Ends 02 hrs:48min Monday morning. Max at 12 hrs:12 min. Go to following link for an animation as seen from Ionia: <https://www.timeanddate.com/eclipse/in/@z-us-14475>



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CHANGING ADDRESS?

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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.

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