

January 2020



# MONTANA GEOLOGICAL SOCIETY NEWSLETTER

Vol 64 No. 3



## Inside this Issue:



### **P2 / EDITOR'S LETTER**

Our Newsletter Editor discusses upcoming MGS events & asks for member feedback.



### **P4 / TOTTH TALKS**

With two talks on fossils & fieldwork, everyone can choose the most suitable of Natalie Toth's lectures to attend.



### **P7 / PPD**

Mark your calendar for the upcoming Past President's Dinner.



### **P10 / SCHOLARSHIP**

Be sure to postmark all applications for this year's scholarship by February 1.

## Upcoming Events:

- Feb 26** - MGS Luncheon - Natalie Toth (*see page 4*)
- Feb 26** - Public Talk - Natalie Toth (*see page 5*)
- Feb 28** - Past President's Dinner (*see page 7*)
- Mar 18** - MGS Luncheon - Eric Ferré (*see page 8*)
- Mar 24** - Lecture - Sarah Friedman (*see page 8*)

*Don't forget to...*  
**Renew your  
MGS Membership!**

Contact Us:

[mtgeo.org](http://mtgeo.org) / [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com)

*Add our email address to your contacts so your Newsletters & Luncheon announcements don't end up in Spam!*

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PO Box 844  
Billings, MT 59103

# Letter from the Editor

Dear MGS Membership,

As we begin a new year and a new decade, you can look forward to a multitude of MGS-sponsored events.

To begin, Natalie Toth with the Denver Museum of Nature & Science has kindly agreed to give two separate talks regarding fieldwork & paleogeology on February 26. These two talks are geared toward different audiences. The technical talk, designed for geologists & those interested in advanced details, will be given during the MGS Luncheon held at the usual venue (see page 4). A second talk will be given at the Billings Public Library later that evening, which is open to the public (see page 5). Please plan to attend both talks and bring family & friends to the evening event at the library. It's sure to be a great one!

As you'll read in the following pages, we also have the Past President's Dinner scheduled for the end of February to honor our Past President Sarah Friedman. Sarah will also be giving a lecture in March discussing Montana geology. Sarah's lecture is one of two educational events scheduled for March, with Eric Ferré joining us on March 18 to speak on the upper mantle.

We hope that you are able to join us for these events, and I invite you to share your feedback with the MGS Board. It is due to your participation and invested interest in the MGS that our society is able to provide educational opportunities for you as a member and the community as a whole. Therefore, if you have ideas about topics you'd like to have featured in a lecture; community events that would benefit from MGS involvement; or simply other geology-related musings, I encourage you to reach out.

Finally, as you trek outdoors during 2020, don't forget to share your adventures with us. I'd love to share your photos in upcoming newsletters, or even include a written feature of your Montana excursions. You can get in touch with me via email, or visit & post to the MGS Facebook page.

*Happy New Year!*

MGS Newsletter Editor  
Jessica Renstrom

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Secretary	Sarah Friedman	406-896-5931
Past President	Sarah Friedman	

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the sandstone that  
thinks it's  
a volcanic rock?*

*A siliclastic*

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give, or find?  
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Contact the Newsletter Editor for more information.



# Montana Geologic Society

**Wednesday, February 26th**

**11:45 AM – Billings Petroleum Club**

Please join us!

- Lunch is \$10 for MGS members
- \$17 for non-members
- Talk is always free

RSVP – [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com)



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## NATALIE TOTH

CHIEF PREPARATOR, DENVER MUSEUM OF NATURE & SCIENCE

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### *How to Dig up Dinosaurs – The Technical Geology and Paleogeography – For Geologists*

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The Earth Science Department at the Denver Museum of Nature & Science facilitates paleontological fieldwork across the entire Rocky Mountain region, from the Dakotas to the Texas-Mexico border. Fieldwork in the Rockies is diverse; it includes areas like the remote backcountry setting of Utah's Grand Staircase-Escalante National Monument, the San Juan Basin in New Mexico, and the badlands of North Dakota and Montana. Additionally, since Colorado is in the heart of the Rocky Mountains, fieldwork can happen locally, specifically in urban Denver. Over the past few decades, Denver and its suburbs have yielded significant paleontological finds, in addition to the less accessible areas in the Rocky Mountain west.

The logistics, planning, and execution of fieldwork in the settings mentioned above requires careful preparation and organization, and each environment comes with its own suite of challenges and successes. Working in remote areas with large (30+ persons) field crews demands detailed planning of all aspects of fieldwork. How do we get equipment, supplies, food, and people into backcountry localities where the nearest paved road is 20+ miles away? How do we prevent a bulldozer from destroying vertebrate fossils and keep crews safe while working in an active construction site? This talk will address some of the difficulties affiliated with facilitating fieldwork in some of the most remote and most urban areas in the United States, and highlight why and how we continue collect fossils in the midst of the perceived "adversity."

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## Biography

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Natalie Toth joined the Earth Science Department at the Denver Museum of Nature & Science in 2017 as a fossil preparator. Prior to joining the Museum, Natalie worked as a field paleontologist at Petrified Forest National Park in Arizona, and spent six years digging fossils across the Rocky Mountain region with the Natural History Museum of Utah. Natalie received her bachelor's degree in geology from Eastern Illinois University, and her master's degree in paleontology from South Dakota School of Mines. In her role as Chief Preparator, Natalie supports the museum's research efforts by facilitating fieldwork across the Rockies and overseeing the day-to-day operations in the museum's fossil preparation lab.

# Montana Geologic Society Public Talk

**Wednesday, February 26th**

**7:15 PM – Billings Public Library**

**Please join us!**

- **Open to the public!**



**NATALIE TOTH**

**CHIEF PREPARATOR, DENVER MUSEUM OF NATURE & SCIENCE**

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## ***How to Dig up Dinosaurs***

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# Upcoming:

## *Past President's Dinner*



### Save the Date for this year's

## *Past President's Dinner*

Honoring Sarah Friedman  
Friday, February 28  
Billings Petroleum Club

Cocktails at 6:00 p.m.; Dinner at 7:00 p.m.  
Free for MGS Members and a guest.

*Keep an eye on your email inbox for an official invitation requesting your RSVP and dinner choice.*

## Science Expo: *Call for Judges*

### *Interested?*

This year the Science Expo is introducing a new digital platform for judge registration. Judges can select their first 3 categories of interest, and the Science Expo staff asks that you denote in the comments box how many years you've served as a judge and if you are interested in judging Industry or Artistic Merit categories.

**Judging Night: Friday, April 24th, 2020**

Orientation & Dinner: 5 – 6 pm

Projects Previews: 6 – 6:30 pm

Projects Judging: 6:30 – 9:30 pm

Montana State University - Billings

Please sign up to judge at: <https://www.msubillings.edu/scienceexpo/>.





# Save the Dates!

## MGS Luncheon Meeting

**Wednesday March 18<sup>th</sup>, 2020**

**11:45 am – Billings Petroleum Club**

Please join us!

- Lunch is \$10 for MGS members, \$17 for non-members
- Talk is always free

RSVP – [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com)



**ERIC FERRÉ**

DIRECTOR OF THE SCHOOL OF GEOSCIENCES

UNIVERSITY OF LOUISIANA AT LAFAYETTE

*What is Magnetic in the Upper Mantle?*

## MSUB Library Lecture Series!

**Tuesday March 24<sup>th</sup>**

**6:30- 8:00 PM – MSUB Campus**

**LI – 148 (library building room 148)**

**Open to the public! Bring your friends and family!**



**SARAH FRIEDMAN**

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## Montana Geological Society 2019-2020 Annual Research Scholarships

### Purpose

The Montana Geological Society (MGS) is a non-profit organization created in 1949 "...to promote interest and research in geology and allied sciences and their practical application, and to encourage fellowship and cooperation among the members." This annual award supports these goals by providing financial assistance for up to two student dissertation, thesis, or senior projects involving Montana geology and by providing a venue for students to present their work to geology professionals in Montana.

### Award

Up to two scholarships, one for \$2,000, and one for \$1,000, may be awarded each year to the most qualified applicants. The successful applicants agree to present their research results at a luncheon meeting of the MGS in Billings, MT, and will receive reimbursement for travel expenses to and from Billings in addition to the scholarship amount.

### Basis of Award

All projects will be reviewed by a committee composed of Officers and Board Members of the MGS. The award will be made based on project merit, difficulty, and innovation appropriate for the applicant's educational level. Projects in the early to middle stages of research will receive preferential consideration over those at or near completion. The awards will only be made to fully qualified and deserving applicants, if any, as determined by the committee.

### Eligibility

Scholarships are available only to full-time students working toward a BA, BS, MS, or Ph. D degree in an accredited geology or earth science program at a Montana college or university. The research area must be based at least partially in the state of Montana.

### Application Packet

Applicants must submit **1.)** a **brief** cover letter that summarizes the applicant's educational background, current student status (B.S., M.S., Ph. D), anticipated graduation date, and research interests. Include name, mailing address, email address, and phone number, **2.)** a **short** (300 words or less), **concise** summary of their approved or proposed project that includes study area, purpose, and applicability of research to Montana geology, along with an advisor's signature, **3.)** a work flow timeline, and **4.)** an estimated itemized annual budget which specifies how the funds from this award will be used. The budget must include the amount and source of all other project funding.

### Deadlines

Applications can be emailed (preferred) or mailed. Emailed applications (as attached file(s) in any standard format) must be sent to [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com) no later than 11:59 p.m., **January 31<sup>st</sup>**. Mailed applications must be post marked no later than **February 1<sup>st</sup>**, and should be addressed to: Montana Geological Society, PO Box 844, Billings, MT 59103. Awards will be announced and payment made in the form of a check to the successful applicant no later than **April 1<sup>st</sup>**.

**MONTANA GEOLOGICAL SOCIETY**

**P.O. Box 844**

**Billings, MT 59103**

**Membership Renewal**

**Last Name** \_\_\_\_\_

**First Name** \_\_\_\_\_ **Middle Initial** \_\_\_\_\_

**ANNUAL DUES:**

\_\_\_\_\_ **\$20.00 Regular**

\_\_\_\_\_ **\$10.00 Student**

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**AAPG Member (please circle) YES NO**

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**Degree #1** \_\_\_\_\_

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