



Founded in 1882, the objective of the Society is to promote the knowledge and understanding of Earth science, and its application to human needs. Samuel Franklin Emmons, 1841-1911, was “Geologist in Charge” of the Colorado Division of the U.S. Geological Survey when it was established in 1879 and was the first president of the Society.

October 2024 Colorado Scientific Society Newsletter

CSS October Meeting **Thursday, October 24, 2024 at 7:00 p.m.** **Calvary Church, Golden, and via Zoom**

Retreat, Recovery, and Subglacial Radiocarbon: Untangling past [in]stability of the West Antarctic Ice Sheet

Thursday, October 24, 2024 at 7:00 p.m. – note a week later than normal

Ryan Venturelli, Department of Geology and Geological Engineering at School of Mines
In-person Meeting at Calvary Church Golden, or Join us on Zoom.

See details about attending in-person at the church below.

Link to Join CSS October Meeting via Zoom

CSS is inviting you to our meeting on Thursday, October 24th at 6:45 pm.

Click to Join CSS Zoom Meeting
from PC, Mac, Linux, iOS or Android

Meeting ID: 874 2917 6581
Passcode: 505361

Abstract: Reconstructions of past ice sheet behavior enable us to refine physical models that predict how much, how fast, and from where Antarctic ice mass loss will contribute to future sea level rise. Geological constraints on paleo ice thickness obtained from above the modern ice surface (e.g., exposure age data from deglaciated nunataks) and on paleo ice extent obtained outboard from modern margins (e.g., sediment core and geomorphic data from the ice-free continental shelf) have served as the primary tools to decipher the topology of the Antarctic Ice Sheet from the Last Glacial Maximum to present. Recent efforts to recover sediment and bedrock from beneath grounded ice in Antarctica offer insight into the southernmost extent of grounding line retreat, yielding a more complete view of ice dynamics through the last deglaciation. In this talk, I will present results from recent subglacial access efforts that have provided direct constraints on a less extensive West Antarctic Ice Sheet in the Holocene compared to today. These new constraints on the timing and extent of grounding line retreat prior to the modern observational record allow for a mechanistic understanding of the drivers of marine ice-sheet evolution, subglacial ecosystem processes, and subglacial Antarctica's role in global biogeochemical cycling. I will conclude by presenting new geochemical and sampling tools under development to enable future work constraining ice-sheet history. By generating this process-to-paleo perspective on the co-evolution of cryospheric, geologic, biologic, and oceanographic systems and combining it with detailed ice-sheet modeling experiments, we can create the context required to reduce uncertainty in sea-level projections on societally relevant timescales.



Dr. Ryan Venturelli

Bio: Dr. Ryan Venturelli is an Assistant Professor in the Department of Geology and Geological Engineering at Colorado School of Mines. Her research group, the Rates and Dates Laboratory, supports undergraduate student researchers, graduate student researchers, and postdoctoral researchers in using isotope geochemistry to reconstruct ice sheet history.

In-person Meeting at Calvary Church Golden

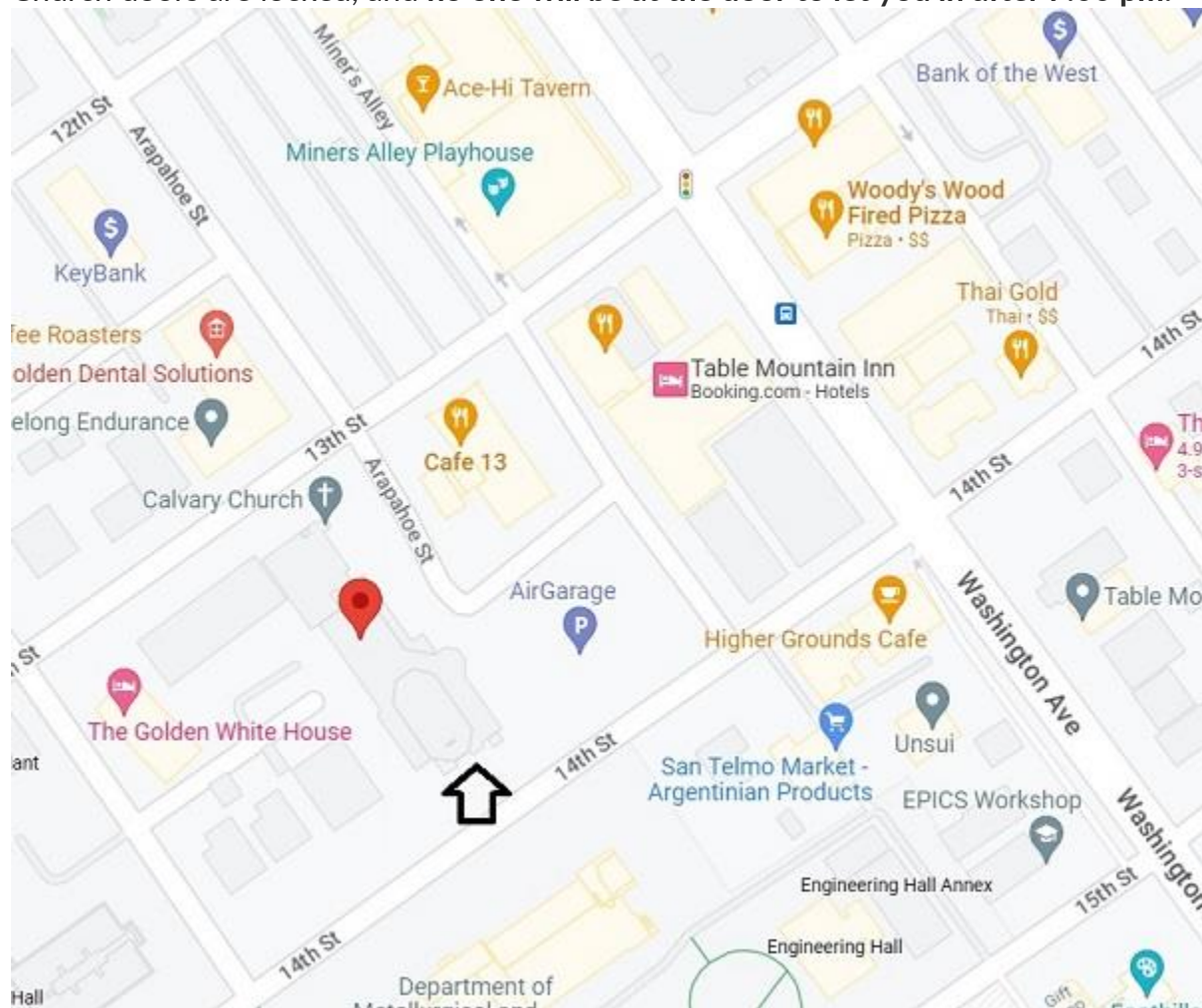
All are welcome – no admission charge

6:30 pm – Social time at in-person meetings

6:45 pm – Join Zoom meetings

7:00 pm – Meeting and Program begin. Please arrive early.

Church doors are locked, and **no one will be at the door to let you in after 7:00 pm.**



Calvary Church in Golden. Enter at arrow on map.

[Calvary Church Golden](#)

Click on link to open a Google map.

Enter from 14th St., go in by the main glass doors at [906] 14th St.

Do **not** enter via the old church above 13th St.

From the 14th Street entrance go down the hallway following Colo Sci Soc signs to Community Rooms 1 and 2, where we meet.

The church doors must stay locked, and we will have a person to let you in at the doors off 14th st.

They want to see the presentation too, so **please arrive before 7:00 pm.**

There will be a phone number that you can text to be let in if you arrive late.

Parking

On street parking is available close by, along 14th St and west of Washington Ave in Golden.

The AirGarage parking structure, which can be entered from Arapahoe St., is \$3.00 for three hours.

Copies of *The Geology of Boulder County* by Raymond Bridge (2004) will be available for \$20.

Caribou Mine Tour – CSS No Moss Gathering

Saturday, October 26th 2024, 10:00 AM to early afternoon

Peyton Jackson, America Clean Resources, will lead the trip

Meet at Caribou Mine, above Nederland, at 10:00 am for an underground tour and an above ground walk. The Caribou Mine is a silver, gold, and lead mine located in Boulder county, Colorado. Zinc and Uranium are also present. See maps below.

Plan on lunch at the Historic Caribou Cemetery site with outdoor hiking opportunities and some very prominent geology on the edge of the Roosevelt National Forest.

What are “No Moss Gatherings”?

Motto: “**a rolling stone gathers no moss**”.

These are usually half day trips in the Denver area.

Pete Modreski started these in the Spring of 2022, encouraging CSS members to get out after the Covid-19 shutdown.



Route from the traffic circle in Nederland, CO to Caribou Mine (from Google Maps)
Directions [from traffic circle in Nederland to Caribou Mine \(PDF\)](#)



Map showing the Caribou Mine and the USFS parking at the road junction above it (from Google Maps)



Caribou portal rehab



Post Blast



Scenic shot from Comstock, Upper Caribou

CSS November Meeting with Student and Member Poster Night

Thursday, November 21, 2024 at 7:00 p.m.

In-person Meeting at Calvary Church Golden or Join us on Zoom

CSS December Holiday Potluck, Meeting and President's Address Quaternary Records of Spring Ecosystems

Tuesday, December 3, 2024 at 5:30 p.m.

Jeff Pigati and Kathleen Springer, U.S. Geological Survey

In-person Potluck Dinner at New Terrain Brewing Company for 50 people or Join us on Zoom

Please pay your CSS dues for 2025!

You may pay dues online or print out a PDF of the membership form and mail it to us with a check. Continuing your membership in CSS will enable us to continue all our ongoing programs, including our field trips, virtual meetings, Student Research Grants, and more.

See [Membership and Donations](#) for the CSS membership PDF and our online membership payment form.

Regular CSS Membership is \$25;

Student Membership, \$5;

Life Membership, \$395.

Send your membership payment, if not done through [our online membership payment form](#), to Colorado Scientific Society P.O. Box 150495 Lakewood, CO 80215-0495.

Thank you!

[Read past Colorado Scientific Society Newsletters](#)

Start or renew your membership with the [Online CSS Membership Form](#)

Or print and mail in the [Colorado Scientific Society Membership Form \(PDF\)](#)

[Archive of Past Colo. Scientific Society Meetings](#)

About the Colorado Scientific Society

The Colorado Scientific Society was founded in 1882 as a forum for the exchange of observations and ideas on the topics of earth science. Lecture topics largely focus on earth science, and are open to the public. In addition to our monthly lecture series, the society is also active in public service. We fund student research grants, construct and post signs that describe local geologic features, and organize and lead field trips.

The Colorado Scientific Society normally **meets on the third Thursday of the month from September through May.** (In the summer months of June-August, too many members are out in the field.)

6:30 – Social time at in-person meetings

6:45 – Join Zoom meetings

7:00 – Meeting and Program begin

Corporate Sponsorship of the Colorado Scientific Society

Corporate sponsorship helps the Society continue to provide earth science-related talks, field trips, and other events to a broad cross-section of Front Range geologists and interested people. Please accept an invitation from the Colorado Scientific Society to become a corporate sponsor, enabling us to continue and expand our programs.

[Details of corporate sponsorship of the Colorado Scientific Society](#)



THE
GEOLOGICAL
SOCIETY
OF AMERICA®

The Colorado Scientific Society is an Associated Society of the [Geological Society of America](#)

Please send comments about the Colorado Scientific Society website to ColoSciSoc.webmaster@gmail.com .

We meet at the [Golden Calvary Church](#) and appreciate them sharing their facilities.

We have our December Business Meeting and Potluck Supper at [New Terrain Brewing Company](#) and appreciate their support.

We appreciate the support for our website by [Table Mountain Web Design](#).