



Colorado Scientific Society – Earth Sciences since 1882
The oldest scientific society in the Rocky Mountain region

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. We focus primarily on earth science, welcoming members with interests in all fields of science. [Learn more.](#)

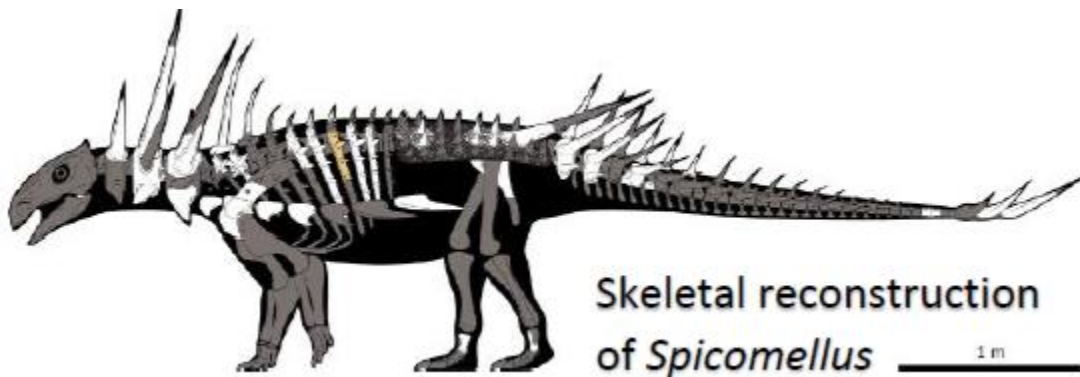
May 2026 Colorado Scientific Society Newsletter

CSS May Meeting & S.F. Emmons Lecture
Thursday, May 21, 2025 at 7:00 p.m.

***Spicomellus*: Extreme armor in the world’s oldest ankylosaur**

Thursday, May 21, 2026

Dr. D. Cary Woodruff, Phillip and Patricia Frost Museum of Science, Miami, FL



In-person Meeting at Calvary Church, Golden

The link to Join the Zoom meeting will be posted here before the meeting.

Link to Join CSS May Meeting via Zoom

CSS invites you to Join our meeting via Zoom on Thursday, May 21st at 6:45 pm.

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



Spicomellus

Speculative rendering by Matt Dempsey

Lecture Highlights:

The ankylosaur *Spicomellus* afer is truly one of the most bizarre dinosaurs discovered to date. Covered head to tail with elaborate osteoderms, including cervical spikes nearly a meter in length, *Spicomellus* looks more Hollywood kaiju than factual dinosaur. However, it's not just the appearance of *Spicomellus* that makes it unique. The construct of its bizarre armament is unlike any other vertebrate—extinct or extant. Being from the Middle Jurassic, *Spicomellus* is also the oldest ankylosaur thus far known; and with this bizarre body armor, is rewriting the functional and evolutionary role of armor in this dinosaurian clade. *Spicomellus*, along with other Gondwanan clades found within the El Mers Group, are helping to further push back, and elucidate, the origins of several dinosaurian lineages.



Reconstructing Spicomellus

Speaker Background:



Dr. Cary Woodruff is the Curator of Vertebrate Paleontology at the Phillip and Patricia Frost Museum of Science in Miami, Florida where he is building a dinosaur collection from scratch. Cary has published numerous scientific papers involving taphonomy, histology (microscopic anatomy), dinosaur vision, fossil laws and regulations, dinosaur biomechanics, ontogeny (growth and development), soft-tissue preservation, dinosaur behavior, and human-fossil interactions. Cary's main research specialization is dedicated to sauropod ("long-necked") dinosaurs studying everything from how long it took them to grow up, how their skeletons changed during growth, how they moved their enormous bodies, how they behaved, how they fed, what their anatomy was like. Cary has also published a number of books on dinosaurs for kids.

Education

BS & MS in Earth Science at Montana State Univ./Museum of the Rockies
PhD in Ecology & Evolutionary Biology at Univ. Toronto/Royal Ontario Museum

Keywords

Ankylosaur, Middle Jurassic, osteoderms, cervical spikes, El Mers Group, Morocco

Flyer for this CSS meeting: [CSS May 2026 Emmons Lecture, Cary Woodruff: *Spicomellus*: extreme armor in the world's oldest ankylosaur](#)

Link to the paper: [Extreme armour in the world's oldest ankylosaur](#)

CSS Past Presidents' Dinner and September Meeting

Thursday, September 10, 2026

Karen Chin, University of Colorado, Boulder
Geological Sciences and CU Museum of Natural History

Dinner and Talk at Mount Vernon Canyon Club



Dr. Karen Chin

Dr Karen Chin

Research

My research investigates the structure and dynamics of ancient ecosystems—particularly those of the Mesozoic Era (about 65 to 250 million years ago). I am interested in how ancient communities of organisms differed from modern ecosystems in composition and organization. Much of my work focuses on tapping information available in permineralized coprolites (fossil feces), but I also examine other trace and body fossils. My work focuses on understanding interactions among ancient organisms, and deducing the environmental conditions in which these organisms lived and were fossilized. I use a multidisciplinary approach by examining geological, biological, and chemical characteristics of fossils and compare the fossil evidence with modern ecosystems to derive paleoecological interpretations.

Keywords

paleoecology, ichnology (trace fossils), petrographic and chemical analyses of fossils, coprolites, dinosaur diets

Research Interests

Primary: Paleontology and Paleobiology, Geobiology
Secondary: Geochemistry, Paleoclimate and Paleoceanography

Education & Training:

Ph.D., University of California at Santa Barbara 1996

CSS October Meeting

Thursday, October 15, 2026

Dr. Josh Lively, Curator of Paleontology
Utah State University Eastern, Prehistoric Museum

In-person Meeting at **Calvary Church, Golden** + online via **Zoom**



Mosasaurus are one of Blake Lively's main research interests

Speaker



Dr. Josh Lively

Joshua Lively, Ph.D., is the Curator of Paleontology at the Prehistoric Museum in Price, Utah. His main research interest is the spatial and temporal change in ecosystems – both freshwater and marine – during the Late Cretaceous, or last 34 million years of the Age of Dinosaurs. Lively's specialties include turtles and mosasaurs, as both groups are well represented in the fossil record. He has spent the last 15 years conducting fieldwork in Utah and beyond.

CSS November Meeting Poster Night

Thursday, November 19, 2026

For Students and Early Career Earth Scientists

In-person Meeting at Calvary Church, Golden

CSS December Pot Luck Dinner and Past President's Address

December, 2026

Speaker Amy Atwater, Director of Paleontology, Friends of Dinosaur Ridge
and current President of the Colorado Scientific Society

More details coming

Click to Join or Renew your
Colorado Scientific Society
Membership

Please pay your CSS dues for 2026!

Membership dues paid in November and December also apply to the following year.

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 our online membership payment form and the CSS Membership printable PDF.

Regular Membership – \$25;

Student Membership – (any level) \$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!

Meetings are normally on the third Thursday of the month.

All are welcome – no admission charge

Join us at in-person after 6:30 pm for social time before the meeting

Join Zoom meetings after 6:45

Meeting and Program begin at 7:00

See [Archives of CSS Talks – Indexed](#) (under Events) for previous Colorado Scientific Society Talks, or just follow the link.

More about some of our past, present, & future CSS activities!

A lot goes on at CSS “behind the scenes”, and if you don’t make it to our meetings in person or browse our website frequently you may not know about them! Let us do our best to update you on some of these that have, or will, take place!

Ongoing:

At each of our in-person meetings we have:

Copies of *The Geology of Boulder County* by Raymond Bridge (2004) are available for \$20; see our Treasurer, Jim Paces.

Colorado Scientific Society T-shirts; if you’d like one, you might check with Jim in advance (jpaces.css@gmail.com) to make sure he’ll have one in your size, on hand at the meeting).

We have **Good refreshments** at each of our meeting!

Each year, CSS has a competitive **Research Grant Program** for graduate and also undergraduate earth science students. Typically, several dozen applicants share in total awards exceeding \$10,000. Our 2026 applications are being evaluated right now for this year’s awards.

Future events:

The Friends of Dinosaur Ridge are planning to open the new **Martin Lockley Dinosaur Discovery Center** (on the west side of Dinosaur Ridge, at the north entrance road to Red Rocks Park) on May 23. We hope to offer a special pre-opening tour of the Center a week or two

before that, perhaps on May 13. We'll keep you informed! Last month, the CSS Council voted to donate \$1000 toward the new exhibit construction at the Lockley Discovery Center.

At the 2026 Geological Society of America annual meeting, in Denver, October 11-14, CSS will sponsor a session as part of the technical program: **Peaks, Plains, and Plateaus: 150 years of Colorado Science Discoveries**. CSS will also sponsor a field trip in the Front Range area near Denver & Golden.

CSS in planning to have, for the first time, a booth at the annual “**Colorado Science [Educators] Conference**”, to be held November 6 at the Colorado State University CSU-Spur Science Education Center at the National Western [Stock Show] Center in Denver. For more information about this see <https://coloradocast.org/CSC> .

Just to list them all in one concise place, here are the dates of all our upcoming Colorado Scientific Society meetings this year; all held at Calvary Golden Church unless otherwise noted:

Thurs., May 21, CSS Emmons Lecture, **The Oldest Ankylosaur**, by Dr. Corey Woodruff
Thurs., Sept. 10, CSS Past Presidents' Dinner, **Mesozoic Ecosystems**, by Dr. Karen Chin; at Mount Vernon Canyon Club
Thurs., Oct. 15, **Turtles and Mosasaurs**, by Dr. Josh Lively
Thurs., Nov. 19, **Poster Night, presentation by students & early career Earth Scientists**
December (date TBD), **Potluck dinner & President's Address**, Dr. Amy Atwater, at New Terrain Brewing Co.

Coming events from other organizations:

Denver Museum of Nature & Science, Earth Science Colloquium lectures are free and open to anyone. Upcoming lectures this season are:

May 20th : Yellowstone hotspot uplift and erosion explored through river records ([Joel Pederson](#), Colorado State University)

June 2nd : Museomics and the Hidden Data in Vertebrate Fossils ([Caitlin Colleary](#), Cleveland Museum)

Talks are in-person-only, from 2–3 pm in Ricketson Auditorium. Museum admission not required to attend. Enter through Staff/Volunteer entrance, 50' east of main visitor entrance, and let Security know you're attending the talk, they will direct you to the location. Walk through Space Odyssey exhibit to the West Atrium (overlooking City Park), then take a right into Ricketson Auditorium. For the full Colloquium schedule see [Home https://sites.google.com/view/dmns-earth-science-colloquium/home](https://sites.google.com/view/dmns-earth-science-colloquium/home) ; more lectures resume in the fall.

The **Pikes Peak Gem, Mineral & Jewelry Show**, sponsored by the Colorado Springs Mineralogical Society, will take **place June 5-7 at the Norris Penrose Event Center**, 945 Lower Gold Camp Road, Colorado Springs. There is a \$5 admission fee.

The Colorado Chapter, Friends of Mineralogy, is sponsoring a mineralogical symposium, “**Colorado 150, Celebrating 150 Years of Colorado Statehood**”, **June 11-15** on the Colorado

School of Mines campus; with lectures, field trips, workshops, and a mineral auction. See www.friendsofmineralogycolorado.org/symposium for full details and registration information.

The **Lake George Gem & Mineral Show** is taking place **Fri.-Sat.-Sun. July 3-5**, 9-5 daily at a completely new (not in Lake George!) date and location, in Cripple Creek. It will be at 5th & Bennett Ave., in the parking lot near northwest of the Cripple Creek District Museum. Free admission and parking.