

Magic Bus Ride with Steven Veatch

By Terry P. Beh

It may not have resembled the "Magic Bus" the classic rock group *The Who* sang about back in the psychedelic 60s, but it certainly was a magical journey as an intrepid group of paleophiles boarded an old school bus in Cripple Creek for a bumpy ride down Shelf Road—and back in time. Led by CSMS member and geologist **Steven Veatch**, the all-day field trip held on July 15th was a fascinating and fun-filled time of learning and discovery about the geology and paleontology found all along the historic roadway.



Photo by Terry Beh

A Geoscience Adventure Class sponsored by the Cripple Creek Park & Recreation Dept., the bus excursion was technically called, "Field Studies in Paleontology: Exploring the Shelf Road from Cripple Creek to Garden Park, Colorado." As I, a friend, and about 12 others took our seats on the aging vehicle, I'm sure we all had visions of fossils dancing in our heads. With temperatures expected in the 90s, everyone lugged ice-filled coolers with drinks and lunch on board—Steve thoughtfully brought a large one full of water bottles (which really came in handy). He also provided a folder containing info and geological maps related to Shelf Road and a pad for notes, though the material he provided was so thorough, there was really no need.

Departing around 9 a.m. with a former Marine commando at the wheel, we quickly passed the old mines and diggings of Cripple Creek, one of which Steve pointed out belongs to him, soon finding ourselves amid the oldest rocks of Colorado—Boulder Creek Granite, dated at 1.7 billion years old and metamorphosed into augen gneiss. As the bus came to the first of many collecting stops, Steve explained that "augen" is a German word for "eye". Indeed, the rock here contained large, red "eyes" of feldspar among white and black bands of quartz and mica, making for an interesting "look". Everyone piled out of the bus to find their own specimens, some returning with a full armload. Here, we also found volcanic breccia that intruded the granite and formed the Cripple Creek gold mining district—and that, no

(See "Magic Bus Ride" on page 4)

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CSMS is an incorporated non-profit organization with these goals:

- To promote and disseminate knowledge of the earth sciences, especially as they relate to mineralogy, lapidary, and fossils.
- To encourage study, collection and fashioning of minerals.
- To accomplish the same through social meetings, lectures, programs, displays, shows, and field trips.
- The Pick & Pack is published monthly to assist and promote the above.

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Mineralogical Society**
Founded in 1936

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Mailer

We encourage everyone to submit articles, photos, illustrations or observations.

Share your experiences, trials and tribulations, your new finds, or simply your experience at our last field trip.

The ability to write well is NOT a requirement. We will fix the grammar while keeping the author's voice, style, and work intact.

Handwrite it, type it, or email it. Format does not matter. All submissions are welcomed.

DEADLINE for items to be included in the next month's issue is the third (3rd) Friday of every month. To submit an item, please use the following:

Photos:

For hardcopy photos, mail to the address below or bring them to the General Assembly Meeting. All photos remain the property of the submitter and will be returned. Electronic photos should be submitted at resolutions above 200 dpi in TIF, BMP, JPG, or PIC format.

Articles:

Mail or email to the addresses below.

ALL FORMATS ARE WELCOMED.

Email: bcain2@earthlink.net or
 Info@csms.us

Address:

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 Colorado Springs, CO 80901
 Phone:
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PRESIDENT'S CORNER



Drew Malin

A good news story this month: Last week I was having dinner in a downtown pub with a client. Shortly after dinner, a friend of my client joined us with his sister, brother-in-law, and 13 year old son. The family was in Colorado on a trip to hike in the mountains, which, of course, had been rained out. In the course of talking about alternative things to do in Colorado, I brought up some of the possibility of interesting rock and mineral trips (creek walks, digs, etc.) and shared some of the stories of our club.

The local friend of my client started in with an old jab, "does the club issue pocket protectors when someone joins", he snickered. I'm used to the bad jokes about **anything** scientific or educational in our "progressive" culture, and I was getting ready to defend the Club's worthiness compared to the last installment of social classics like "Sex in the City" or "Survivor" when a funny thing happened...the brother-in-law ignored his host and turned to me with real enthusiasm and said, "Oh, my son and I are always hunting down rocks...we love doing that!" So, instead of defending our hobby, I got to revel in the status of Oracle, dispensing information on the WMMI and all the other rock and mineral things to do in the area.

Aye, it was fun, but even more satisfying was when the "pocket protector" guy got interested. Turned out he has two kids, 6 and 8, and, like the rest of us, was looking for something better than video games to show them. **Game, Set, and Match to the CSMS!**

In a culture that seems to move daily to the "lowest common denominator", it's a pleasure to be involved in a group that provides a bit of intellectual light in the storm. And the moral of this story is—don't be afraid to spread the word. You might be surprised at how hungry people are for just what we offer.

Family Exploration Days: What's Mined is Yours! - WMMI, Oct 14 1pm

Discover how geology, mining, and reclamation allow you to live a 21st Century lifestyle...right down to the rocks that you eat! Demonstrate mining techniques as you play the cookie mining game, identify rocks and minerals, and perform hands-on mineral identification. Get a chance to explore the hobby of rock collecting, and learn what rocks are in your foods!

We need members to assist Jim Busnell and Rick & Pat Olson with CSMS activities at this fun event. Please contact Jim for additional information.

October Meeting Program

Devil's Head; Prince of Wales Island; Fairfield, Utah; Red Cloud Mine; Mount Antero; Harvard University; Smithsonian Institution. What do these diverse places have in common? Come to the October meeting and learn the connection of these places with CSMS!

Edwin J. Over, a CSMS charter member, was one of the greatest field collectors of the first half of the 20th century. Specimens he collected are in the leading mineralogical museums around the world, and he was well-known to many of the famous mineralogical scientist of the period.

Ray Berry will present a slide program about Ed Over that was gleaned from the historic writings of Over and his peers. Photos and stories from CSMS files and from the published writings of those who knew him best have been put together in a program by Ray that will help you get to know another chapter in the history of our own Colorado Springs Mineralogical Society.

AFMS News—

It's Been a Great Year

By Jim Robinson, AFMS President

The AFMS Convention in Nashville was well attended, and I want to thank the Middle Tennessee Gem & Mineral Society for hosting this event. It seemed that members of the club had thought of everything to make our stay a pleasant one. Unfortunately, I was ill during much of the week in Nashville and really could not enjoy the show as I would have wanted to.

The AFMS annual meeting went smoothly. The Uniform Rules committee held its meeting as well and the upcoming changes to the competitive rules. They go into practice on January 1, 2007.

This will be my last message to you as President of the American Federation. I want to say thank you to my officers and committee chairpersons. They are the people who keep this organization ticking; who provide guidance and expertise; and who can be relied on to answer questions or provide advice when asked.

It has been a privilege to serve you and an honor to be associated with so many dedicated rockhounds. This has been a wonderful year, and Awilda and I have had so many opportunities to meet and hear from so many wonderful people.

From the President-Elect

By Dr. Robert L. Carlson

If you didn't go to the AFMS show in Nashville, Tennessee, you missed a treat. The host hotel was in the process of renovation, so the rooms were excellent for a price that was well below what one would expect to pay. Service throughout the hotel was above expectations. The meetings and the banquet were handled to near perfection. There were very few long winded speeches, and the meetings and banquet were completed in near record time.

The show was in an air-conditioned building at the Fairgrounds. There were not many displays, but there were many dealers. Speaking of displays, there were ten entered into competition, and five of those won AFMS trophies—50%. Not bad. While numbers of entries in competition seems to be going down, the quality of the exhibits seems to be going up.

I enjoyed myself; and if you attended, I hope that you did too. The next AFMS show and convention will be held in Roswell, New Mexico (yes, it is part of the United States and passports are not required—recommended—but not required).. In Roswell, prepare yourselves to have a good time. Those with no sense of humor nor adventure may have a difficult time; however, that doesn't apply to any rockhound that I ever have known.

On another note, I have a new e-mail address. It is: drobertcarlson@yahoo.com. If you wish to contact me via e-mail, please include "AFMS" in the subject line. If I don't recognize the name, and there is no subject, or the subject has "GREETINGS", or something that I don't recognize, I will delete it as spam. Your communications are important to me, so please let me know that you are one of the good persons. Other ways to communicate with me are by snail mail—1585 Los Pueblos, Los Alamos, NM 87544—or by telephone: (505) 662-5534.

Recipe for a Good Rock Club

Author Unknown

Assemble a group of rockhounds in assorted sizes and personalities.

Measure accurately:

- 1 cup friendly words
- 1 cup understanding
- 1 cup courtesy and patience

Sift carefully and remove all malice and ego. Add a dash of wit and humor, warm welcome for all, and a heart full of cooperation. Praise when needed. Mix well until blended into a smooth running organization. Sprinkle with good time and fun. Garnish with new members. Serve with warm greetings. Plenty for all.

Upcoming Shows

October 28-29

Tulsa Rock & Mineral Society
Gem Show, Expo Square,
Tulsa, OK.

November 11-12

27th Annual New Mexico Mineral Symposium, Macey Center, New Mexico Institute of Mining and Technology, Socorro, New Mexico.

December 8-10

Flatirons Mineral Club annual show at the Boulder County Fair Grounds, 9595 Nelson Rd, Longmont, CO. Friday 10-7, Saturday 9-6, and Sunday 10-4.

2007

March, 2nd Weekend

Deming Gem & Mineral Society Rockhound Roundup, Deming, NM.

June 7-10

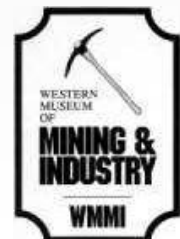
RMFMS/AFMS Regional Federation show at Roswell, NM.

June 22-24

CSMS Annual Gem & Mineralogy Show, Phil Long Expo Center, Colorado Springs, CO,

Free USGS Map, Compass, and GPS Classes

USGS continues to offer these free classes for the public, the 2nd Friday of each month, at the Denver Federal Center, Lakewood, CO. Bldg. 810. Mornings (9-11) are Map & Compass, and afternoons (12-4) are GPS. To register, call 303-2024689 or email gpsworkshops@usgs.gov to reserve a place; bring your GPS unit if you have one.



Magic Bus Ride - continued from page 1

doubt, contributed to turning the granite to gneiss. I hate to say it, but augen gneiss is nice gneiss (groan). In addition to good samples of these rocks, I also found a small, rusted spike from an ore car track about a third the size of the typical railroad version.

Accounting for approximately the upper third section of the road, other stops in the granitic rocks included the Roosevelt Drainage Tunnel from which a cooling breeze flows, the lower Carlton Drainage Tunnel that still drains the mining district, and Window Rock, a photogenic natural arch high up in the granite wall.

The next third of our magic bus trip carried us into ancient marine, Paleozoic sediments overlaying the Boulder Creek granite, including Ordovician, Mississippian, and Pennsylvania rocks. Stopping twice in the purple/green Ordovician Harding Formation, we found plant trace fossils and small, blue armor plates from early armored fish—someone also found a section of nautiloid. This was a great area to walk around and explore. I'm sure that many of use could have spent the whole day there.

The last third of Shelf Road is characterized by the Mesozoic rocks of the Jurassic Formation where

dozens of dinosaur fossils have been found, including Allosaurus, Stegosaurus, Ceratosaurus, and Diplodocus—but not T-Rex, which Steve pointed out is mistakenly depicted on the Garden Park historical marker. We had lunch there. If you ever do this on a 90-degree day, follow the trail behind the restrooms to the *shaded* tables in back, unlike some other people I know who grabbed one of the near tables and baked in the sun. You can even soak your feet there in the cool waters of Four Mile Creek! This is one of the prime areas in which March and Cope competed for dinosaur discoveries as part of their "Bone War". Between them, the bones of over 65 different dinosaurs were removed from this area!

Departing from there, our bus took us over to Skyline Drive, the one-way road over a narrow bridge near Canyon City, which contains dozens of tracks of Ankylosaurs and Theropods. The trip concluded at Dinosaur Depot, a small museum in Canyon City that features fossils from the local area. Among its displays: a life-sized cast of the fully articulated Stegosaurus skeleton found near Garden Park in 1992 and a 20-foot section of a petrified tree found by a teenager a few years ago. Along the way, Steve and his assistant, Don, also handed out fossil shark teeth and Moroccan cephalopods to everyone, in addition to Oreos cookies and apples. What more could a paleophile ask for? - truly a magic bus trip!

Steve will be hosting 3 more classes as part of Cripple Creek's Geoscience Adventure series in October 2006, focusing on the Florissant Fossil Beds and the History and Geology of the Cripple Creek Mining District, as well as a redo of Shelf Road. For more information on these events, call CCPRD at 719-689-3514 or contact Steve at sgeoveatch@att.net. See flyer on page 13.



Photo by Terry Beh

Tidbits

To tell the weight of a stone easily: Using US coins Dime = 11 carats, Penny = 15 carats, Nickel = 25 carats, Quarter = 28 carats, Half-Dollar = 56 carats. These are approximate weights.

From Rocky Tales via Rockhound Rambling, 1/06

Toothpaste with fluoride formula has the unique characteristic of penetrating stone, ceramics, brick, or terra cotta and flushing dirt to the surface, where it can be washed away with water. It was used to restore Etruscan vases by New York's most famous art and antique restorer.

From Rocky Tales via Rockhound Rambling, 1/06

Silversmithing Hint: When you use fine steel wool on a piece you're making, be very sure to rinse the silver thoroughly in water before continuing the next step of soldering. Even the heat of the torch will not eliminate the steel wool dust that accumulates on the piece. If you drop it uncleaned into the pickle, you will get a fine case of copper plating, entirely covering the piece.

From Rocky Tales via Rock Bag

Legends of the Lost: Badger Mountain Beryl

By Andy Weinzapfel

This summer, the Lake George Gem and Mineral Club lost a founding member, passionate rockhound, and dear friend, **Bob Madole**. One of his mineral donations, a light green hexagonal beryl crystal in quartz matrix, resides in the Pikes Peak Historical Society museum in Florissant. Two years ago, while working together at our annual show, Bob shared this mineral locality with me. Since much time had gone by since his discovery, and his declining health prevented him from conducting a new ground investigation, the description was not very specific. On a couple of occasions, I looked without success, but never conducted any systematic search. Bob was a generous person who shared his favorite mineral localities with other. Mindful of Bob's spirit of sharing, I am passing this on.

First of all, you need to know that the trip up Badger Mountain requires a high-clearance vehicle because of abundant moderate-sized rocks in the road. Four-wheel drive is probably not essential, but the last five miles can be bone-jarring. Due to erosion from monsoonal rains this summer, the road has deteriorated. The top is not far below the timberline.

Directions:

Go west a few miles from Lake George on highway 24, toward Wilkerson Pass. Continue past the Round Mountain Campground turnoff. Take a right onto Park County Road 31, and head north. Turn left at Marksbury Gulch, going west to La Salle Pass. From there, head south up Badger to Bob's locality. If you wear dentures, put on some extra stick-em at La Salle Pass. The adventure is about to begin! In a few miles, you will pass a delightful clearing on the right affording a good view of South Park. If you look closely, there is an old wooden hang gliding launch ramp below the road.

Badger has previously produced beryl, garnet, etc. from a claim on the west side of the road just above this hang gliding locality. The region has been mapped by the USGS but not in much detail. Most of the country rock is old metamorphic terrain, intruded by pegmatites. Bob's discovery is "in a quartz outcrop farther up the mountain, a few hundred feet east of the road, about a mile south of the parking lot on top". Most of this area is heavily forested. The map suggests you can access the top of Badger Mountain from Wilkerson Pass, but you can't.

Close to the top of Badger, the road forks. Take the left one; the right is a service road to cell phone

(See "Badger Mountain" on page 12, includes map)

Vandals Check Out More Than Books at Penrose Library

By Richard Strecker

Previously, someone hiding in the library after hours, vandalized the CSMS display case of Colorado minerals housed at the Penrose Public Library, downtown branch. The case was broken and some of the finer crystal specimens were stolen. Vandals struck again in July this year and damaged the light fixture and scattered the specimens.

The display was a gift of the Coil family, given in memory of **Clarence Coil**, more than two decades ago. Clarence Coil, an outstanding field collector, was a long-time member and past president of CSMS. The display generates publicity, prospective members, and public awareness of CSMS.

Extensive repairs were previously made by CSMS members Ray Berry, Rob Eames, and myself after a thorough inventory and replacement of missing specimens. The July incident resulted in only the light fixture being damaged. It was removed, the specimens rearranged, and the case was pushed back against the wall thus limiting future damage by jarring and disarrangement of the specimens. It is felt that the ceiling lighting is adequate, and the light will not be replaced.

The Waddell case of minerals is located on the main level of the library about ten yards north of the checkout desk. The collection is ordered, neatly arranged, and represents typical mineral specimens of the Pikes Peak Region and Colorado. The next time you're in the library, visit our great display.

October Birthstone: Opal or Tourmaline

from Mineral.Galleries.com

Most people consider tourmaline to be a single mineral. But in fact it is a group named for several different, but closely related minerals. Members of the Tourmaline Group are favorites among mineral collectors. Their rich and varied colors can captivate the eye. Even the black opaque tourmalines can shine nicely and produce sharp crystal forms. Tourmalines are cut as precious gems, carved into figurines, cut as cabochons, sliced into cross-sections and natural specimens are enthusiastically added to many a rockhound's collection.



RMFMS News *Excerpt from Richard Jaeger, Pres.*

The Rocky Mountain Federation Convention and Show was held in June in Stillwater, OK and was by all measures another successful event in spite of record setting high temperatures. The show had many excellent dealers, displays, working exhibits, programs, kid's activities, etc. There were 14 competitive exhibits (*AFMS Convention in Nashville had only 10 competitive entries*), 5 of which were awarded trophies. Thirty clubs were represented at the Delegates Meeting with 26 as the minimum number needed for a quorum; this was a slight improvement over the last 2 or 3 meetings.



I do need to say something about hosting RMFMS Shows. As you know, Roswell will host the 2008 Show. At the Roswell Show, I hope we have applications for at least the 2009 and 2010 shows. I want all clubs in the Federation to understand a few things about hosting the Convention/Show. Basically, you run the show just like you would your normal club show with a few changes, which may be different for some of you. The RMFMS needs to have the following: It needs to be a 3-day show, and it needs to have a headquarters hotel/motel. Space needs to be provided for the Executive Committee meeting on Friday and for the Annual Delegate's Meeting on Saturday. Arrangements need to be made for the Editor's Breakfast on Saturday morning and for the Awards Banquet Saturday evening. I also want you to know that competitive completion is part of the Federation Show but that the RMFMS provides judges, trophies, and ribbons for that competition; your club simply needs to let the Uniform Rules Chairman know how many competitive cases are entered and in what categories so that he may make the arrangements. You must also know the profits from your show are to be split 50/50 with the RMFMS but that you can petition to have parts of your show such as perhaps grab bags, kid's games, or silent auction exempted from the split if you wish. Also, the Federation will provide you with a loan of \$750 to help with early show expenses.

Roger Pittman and the Colorado Springs Club have prepared a CD on putting on a show, which will be available through the Supplies Chairman.

RMFMS Officers elected at the meeting:
President—Richard Jaeger, Tulsa, OK
Vice President—Stan Nowak, Enid, OK
Secretary—DeLane Cox, Bentonville, AR
Treasurer—Gene Maggard, Wichita, S

State Directors elected at the meeting:
Colorado—Mike Wheat
New Mexico—Yonis Lone Eagle
Utah—Jan Badertscher
Wyoming—Joyce Johnson

What Happens to Club Bulletins?

Author Unknown

It is said that—of every one hundred people who receive a club bulletin, 3 discard their copy along with other material they regard as junk mail; that leaves 97.

Seventeen have no way to get the staple out, so they just lay it down and forget it; that leaves 80.

Seventeen powerful ones rip the bulletin apart, that leaves it torn and wrinkled, not worth reading; that leaves 63.

Thirteen open it, but don't have their glasses handy, so that ends that; that leaves 50.

Twelve look at the first page—they aren't mentioned there, so they chuck it; that leaves 38.

Nine glance through it, then lay it down where it gets buried in a pile of other papers and magazines; that leaves 29.

Ten exchange editors read it to find out something they can use; that leaves 19.

Thirteen members read it because they are interested; that leaves 6.

Five relatives are reading out of loyalty to the editor; that leaves 1.

The editor reads it to admire the work and check for typos.

Editors' Note: *We know this is not the case of our Pick&Pack readers, because Bill and I quickly hear about it when we've overlooked a typo.*

Our September Issue was placed on Ackley's Rocks & Stamps web site thanking us for the article we wrote about them! We printed extra copies and took them to their store where they were hastily grabbed up by customers. A second batch went almost as fast.

We have also posted a current copy to the RMFMS web site (last copy posted was April 2005). We will continue to spread the word about CSMS via the other available web sites. We also provided reprints of Pick&Pack articles to RMFMS for their newsletter. Steven Veatch's article, "Aerial Photo Shows Outline of Ancient Lake Florissant" was printed in the RMFMS October issue!

Your articles and information makes this happen. We're very grateful to those who have contributed. We would like to start a monthly column with news from our 'how to' satellite groups but need information from leaders and/or members attending.

Ways you can contribute:

- *Take pictures of an event and jot down your thoughts; we'd be happy to assist you with the writing.*
- *If you find something in another publication that you feel would be of interest to other CSMS members, get a copy to us.*
- *We could also start a "Questions from the Readers" column wherein we would research and print an answer.*

*Keep Rockin',
Bill & Betty Cain*

Regular meetings of various groups

Café Scientifique features a talk and discussion on some current science topic; 6-30-8:00 p.m. Tuesday evening once a month (approximately the 3rd Tuesday) at the Wynkoop Brewery (Mercantile Room), corner of 18th & Wynkoop Streets, Denver. No charge; all are welcome.
<http://cafescicolorado.org>

Colorado Scientific Society, monthly meetings with one or two speakers on an earth science topic, 3rd Thursday, 7:00 p.m. American Mountaineering Center, 710 10th St. (NE corner with Washington), Golden, CO.
<http://www.coloscisoc.org>

Denver Mining Club, Informal weekly luncheon meetings with a speaker, every Monday, 11:30-1:00, Country Buffet, 8100 W. Crestline Ave, #A3, Littleton, CO (about 1/2 mile north and east of the intersection of Wadsworth Blvd. & Bowles), tel: 303-933-9923. No charge, but all who attend must purchase a lunch at the restaurant. See web site http://china-resources.net/den_min.html

Denver Region Exploration Geologists' Society (DREGS) meets monthly on the 2nd Monday, 7:00 p.m. Consolidated Mutual Water Company (lower level), 12700 W. 27th Ave., Lakewood, CO; no charge, all are welcome to the meetings.
See <http://www.dregs.org/>

Rocky Mountain Assoc. of Geologists (RMAG) has monthly luncheon meetings with a speaker at the Marriott City Center, California St. between 17th & 18th Streets, 11:30 a.m. Luncheon cost is \$24; no reservations are needed for the talk only.
See <http://www.rmag.org/>

USGS Colloquium Series, lectures on Thursday, 1:30-2:30 p.m. Foord Lecture Room, Bldg. 20, Denver Federal Center, Lakewood, CO. USGS staff, visitors, and guests are welcome. See <http://geology.cr.usgs.gov/crg/colloquia.htm>

Western Interior Paleontology Society (WIPS), meets 7:00 p.m. first Monday of the month, Sep-May, Ricketson Auditorium, Denver Museum of Nature and Science, <http://www.wipsppc.com/>.

Classifieds . . .

NOTICE—Items listed for sale in the Pick&Pack are displayed only as an informational service to our members and advertisers. CSMS and/or the Pick&Pack do not promote nor warranty any item displayed. The sellers and buyers are responsible for the condition and ownership of any item shown.

BOOK FOR SALE

Minerals of Colorado
by Edwin Eckel, Robert Cobban, Shirley Mosburg, and Friends of Mineralogy Colorado Society,
Oct 1977, Hard Cover
Retail \$150—Sale price \$90
Marge Regal
(719) 599-3031

Auction for widowed rockhound by the Stillwater Mineral and Gem Society,
October 14th, 9:00 CST
Dodrill Rock Museum, 123 S. Cleveland, Cushing OK
Contact SMGS at
(405) 372-8635.
GREAT BARGAINS!

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email: gallery@ris.net 719-783-9459
Fall Hours: Friday & Saturday 10:00 to 5:00

Collectable minerals, fossils, crafts & local artists

Fossil Spiders from Florissant

By Steven Wade Veatch



The order of Araneae (true spiders) are represented as a large and diverse group in the 34.1 million-year-old Florissant Formation. Spiders were among the earliest animals to live on land. They are thought to have evolved about 400 million years ago from primitive ancestors that emerged from water to live on land. Spiders are arachnids—not insects, however both spiders and insects belong to the largest group of animals on Earth, the arthropods.

Differences Between Spiders and Insects

Feature	Spiders	Insects
Main body parts	2	3
Walking legs	8	6
Eyes	Simple	Compound
Jaws	Piercing (fangs)	Chewing
Antennae	No	Yes
Ability to fly	No	Yes
Abdominal silk spinning organs	Yes	No

Table 1.

Florissant is well-known for its fossil spiders. More than 150 specimens of spiders have been found in the Florissant shales (Kinchloe, 2003). **Toni Clare**, owner of the commercial quarry north of the Florissant Fossil Beds National Monument, collected the specimen shown in figure 1 in 1997. When spiders die their legs normally curl under their body (Meyer, 2003). Florissant spiders, including the specimen in figure 1, have their legs extended, rather than curled up. It has been argued that the extended legs of Florissant's spiders suggest the waters of ancient Lake Florissant, during the latest Eocene, were warmer or more acidic than normal: the likely cause may have been from thermal vents associated with area volcanism or from ash falls (Meyer, 2003).

It is difficult to assign Florissant's fossil spiders to a genus and species based on their external features observed in the paper shales. Since microscopic characteristics cannot be seen in the fossil impressions at Florissant, an outline morphometric study, using carapace (dorsal exoskeleton) shape and leg characters, has been effective in making family placements of fossil spiders (Kinchloe, 2004).



Figure 1. This Eocene-age fossil spider is a male, based on the swelling of the pedipalps. Many fossil spiders are impressions that are barely discernable. Florissant Fossil Beds National Monument specimen number 2971A. Photo: R. Wolf.

All spiders have two well-divided body sections: the cephalothorax (prosoma) followed by an abdomen (opisthosma) (Grimaldi, 2005). The abdomen contains the digestive and reproductive systems and on the ventral surface near the apex are spinnerets that deliver small threads of silk. Silk has many functions such as making intricate webs that capture prey, encasing eggs, and building elaborate nests or burrows. Spiders with a distinctive silk organ, called a cribellum, are included in a special group called the Cribellatae. The fossil spider in figure 1 has a cribellum and belongs to this group (Rasnitsyn, personal communication, 2006).

Taxonomic Classification

Phylum	Arthropoda
Class	Arachnida
Order	Araneae (spiders)

Table 2. The specimen in Figure 1 has not yet been classified beyond the order. It is difficult to classify some of Florissant's fossil spiders into higher taxonomic categories.

Spiders have eight walking legs, all attached to the cephalothorax. On the front of the cephalothorax are the mouth, fangs to bite prey, and eyes. The first pair of appendages—the chelicerae—are used for piercing, handling prey,

(Continued on next page)

and injecting venom. The second pair of appendages, the pedipalps, are used for mating and are much larger in male spiders than in females.

All species of spiders are predatory—spiders that do not spin webs, such as wolf spiders and tarantulas, stalk or ambush their prey. Spiders feed by a process known as external digestion. When



Figure 2. Yellow Garden Spider (*Argiope aurantia*), Wellington, Kansas. Photo: © 2003 Joseph Hall.

spiders catch an insect, they inject venom that paralyzes their prey. The spider's venom also contains digestive enzymes. These enzymes liquefy most of its victim's insides so the spider can feed on this mixture of nutrients.

Spiders were once a part of an ancient ecosystem at Florissant that has long since vanished; the only record of it is held in the fossil beds. Some

of the spiders that lived there built elaborate webs; several built tunnel-like lairs under rocks or under the dead leaves littering the primeval forest floor, while others lived on rocks or trees. Some of the spiders ultimately turned into fossils. More exciting discoveries of these remarkable fossils will no doubt occur and add to our understanding of this prehistoric ecosystem and these interesting creatures.

References Cited:

- Grimaldi, D and Engler, M. S., 2005, The evolution of insects: New York, Cambridge University Press, 689 p.
- Kinchloe, A. E., 2003, A taxonomic study of the Eocene spiders from Florissant, Colorado: Geological Society of America Abstracts with Programs, v 35, no. 6, p. 537.
- Kinchloe, A. E., Smith, D.M., Cushing, P. E., and Gurlalnick, R., 2004, A morphometric study of the Eocene spiders of Florissant, Colorado: Geological Society of America Abstracts with Programs, v 36, no. 5, p. 40.
- Meyer, H.W., 2003, The fossils of Florissant: Washington, D.C., Smithsonian Books, 258 p.



Scientist: Humans Strange, Neanderthals Normal

By Charles O Choi,
www.livescience.com,

submitted by John Harrington, CSMS Fossil Group Leader

Neanderthals are often thought of as the stray branch in the human family tree, but research now suggests the modern human is likely the odd man out.

"What people tend to do is draw a line from our ancestors straight to ourselves, and any group that doesn't seem to fit on that line is divergent, distinct, unusual, strange," researcher Erik Trinkaus, an anthropologist at Washington University in St. Louis, told *LiveScience*. "But in terms of evolution of our family tree, the genus *Homo*, we're the outliers, and the Neanderthals are more toward the core." Humans are not at the inevitable end of a sequence. Trinkaus said, "It just happens that we happen to be alive today, and Neanderthals are not."

Trinkaus spent decades examining fossil skeletons and over time realized that maybe researchers looked at Neanderthals the wrong way. Over the last two years, he systematically combed through fossils, comparing Neanderthal and modern human skull, jaw, tooth, arm, and leg traits with those of the earliest members of the genus *Homo* in terms of their shape. "I wanted to see to what extent Neanderthals are derived, that is distinct, from the ancestral form. I also wanted to see the extent to which modern humans are derived relative to the ancestral form," Trinkaus said. Trinkaus focused on skeletal features that seemed most strongly linked to genetics, as opposed to any traits that might get influenced by lifestyle, environment, or wear and tear. When compared with our common ancestors, Trinkaus discovered modern humans have roughly twice as many uniquely distinct traits as Neanderthals. In other words, Neanderthals are more like the other members of our family tree than modern humans are.

"In the broader sweep of human evolution, the more unusual group is not Neanderthals, whom we tend to look at as strange, weird, and unusual, but it's us, modern humans," Trinkaus said. Modern humans, for example are the only members of our family tree who lack brow ridges. "We are the only ones who have seriously shortened faces. We are the only ones with very reduced internal nasal cavities. We also have a number of detailed features of the limb skeleton that are unique," Trinkaus stated.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
OCTOBER 2006 — CSMS CALENDAR						
1	2	3	4	5	6	7 8:30 Geoscience Adventure Class 12n Lapidary Group Mtg
8	9 7p Board Mtg	10 7p Micromounts Group Mtg	11	12	13 7:30p Crystal Study Grp Mtg	14 8:30 Geoscience Adventure Class 12n Jewelry Group Mtg
← Earth Science Week →						1p WMMI Family Exploration Day
15	16	17	18	19 7:30p General Assembly Mtg	20 Pick&Park Deadline	21 8:30 Geoscience Adventure Class
22	23 7p Faceting Group Mtg	24 7:30p Camera Club Mtg	25 7:30p Fossil Group Mtg	26	27	28
29	30	31				

Locations

Board Meeting: 2nd Monday @ 7:00p. SilverWood Hotel
Drew Malin: 531-7594

Camera Club: 4th Tuesday @ 7:30p Senior Center, COS
Roger Pittman: 683-2603

Crystal Study Group: 2nd Friday @ 7:30p, 1514 North Hancock, COS;
Kerry Burroughs: 634-4576

Jewelry Group: 3rd Saturday @ Noon-4:00p, 6608 Gambol Quail Dr. East, COS
Rick Copeland: 594-6293

Faceting Group: 4th Monday @ 7:00p, Paul Berry's home
David Wilson: 635-7891
dlwilson@pcisys.net

Fossil Study Group: 4th Wednesday @ 7:30p, John Harrington: 599-0989

Lapidary Group: 1st Saturday @ Noon 3085 Rhapsody Drive, COS. **No meetings in August or September.**
Drew Malin: 531-7594

Micromounts Group: 2nd Tuesday @ 7:00p, 1514 North Hancock, COS
Phil McCollum: acc@friei.com
Moyra Lyne: 442-2673

Refreshments for General Assembly Meeting—2006

We've been a bit off direction on the refreshments schedule this year due to non-publication of the Pick&Pack during the first quarter of the 2006. We're back on track now for the rest of the year with the following:
October=Micromounts Group; November =Faceting Group; December=**Everyone**

President	Drew Malin	531-7594	advanceone@adelphia.net
Vice President	Linda Lavery	520-5939	chilipepper24@juno.com
Secretary	Rick Copeland	594-6293	rick.copeland@covad.net
Treasurer	James Bushnell	598-9262	bushy@pyramidpeak.com
Membership Secretary	Brenda Malin	531-7594	advanceone@adelphia.net
Managing Editor	Bill & Betty Cain	634-8205	bcain2@earthlink.net
Member-at-Large	John Casto	329-0912	Jcasto@fvs.edu
Member-at-Large	Brent Williams	632-3552	zaphod1863@yahoo.com
Past President	Robert Landgraf	687-3195	RMLWP74@aol.com
Show Chairperson	Lorrie Hutchinson	382-3503	forlorrie_h@yahoo.com
Field Trip Director	Brent Williams	632-3552	zaphod1863@yahoo.com
Librarian	Sarah Udell	237-7983	sarahudell@hotmail.com
Camera Club	Roger Pittman	683-2603	rpittman@netzero.com
Crystal Study	Kerry Burroughs	634-4576	kburroughs@adelphia.net
Faceting Group	Dave Wilson	635-7891	dlwinlson@pcisys.net
Fossil Group	John Harrington	599-0989	harrington1@mindspring.com
Jewelry Group	Rick Copeland	332-7915	rick.copeland@covad.net
Lapidary Group	Drew Malin	531-7594	advanceone@adelphia.net
Micromount Group	Phil McCollum		acc@friei.com
Pebble Pups	Jennifer Morris	310-8367	ricklovesjenjen@yahoo.com

COLORADO SPRINGS MINERALOGICAL SOCIETY

Minutes, General Assembly

September 21, 2006

Drew Malin, President, called the meeting to order at 7:35 p.m.

Minutes of the previous meeting were accepted as published.

Treasurer's Report

Club accounts show normal activity and balances. The annual report will be made at the October Meeting.

Satellite Groups

Camera, Crystal, Faceting, Fossil, Jewelry, and Lapidary group leaders announced dates, locations, and programs for next month; no report was made by the Micromount group.

Field Trips

- Ray Berry is conducting another **Gold Camp Road Trip** on **September 30**. Meet at the Park-n-Ride at Woodmen and Corporate Drive at 8:00 am sharp. Contact Ray for further details.
- **Dinosaur Auto Tour of Picketwire Canyon**, south of La Junta. If 15 people are interest (cost \$15/pp; 4-wheel vehicle), we can schedule for **October 21**. Largest known set of dinosaur tracks in North American. Full day adventure. Contact Roger Pittman for details.

Old Business

- The display case at the Pikes Peak Library has been vandalized twice. Richard Strecker fixed it and wrote a report to be published in the Pick&Pack
- Drew reported that the membership directory will be published soon.
- Western Mining Museum has Colorado Rockhounding display as published in the Pick&Pack.
- Pete Modreski will be speaking at the Western Mining Museum on September 30.

New Business

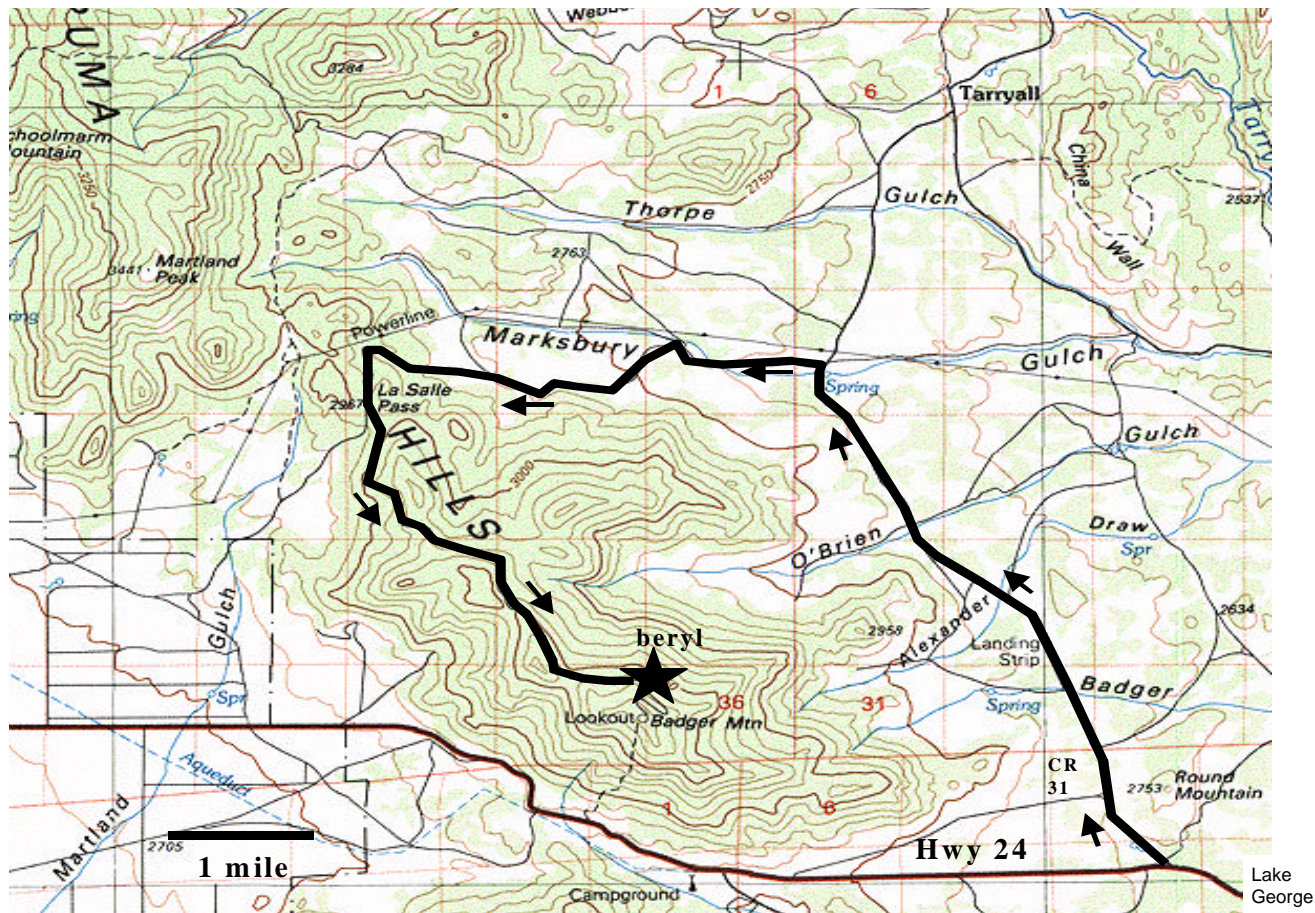
- Silent Auction—Saturday, December 9 at the Silverwood Hotel, 10:00 am to 3:00 pm. Some of the proceeds will go to increase the Science Fair prize total from \$175 to \$250. The rest of the proceeds were proposed to go to the Crystal Group for the purchase of pressurized cleaning equipment; motion made, seconded, and carried by the members.
- Kay Thompson was appointed as the new Show Chairman. Congratulations and thank you, Kay!
- 2007 Show date has been changed to the weekend following Father's Day, June 22-24, 2007.
- Ray Berry has organizing a 10-week Mineral Identification Workshop that will be conducted by Ed Raines. Cost is \$150 per person which includes equipment and samples. Classes will be held every Wednesday from 6:00 pm to 9:00 pm, beginning October 11. Location is the Silverwood Hotel.
- Seeking volunteers for Board positions for 2007; i.e., President, Vice President, Secretary, Treasurer, Membership Secretary, and 2 Members-at-Large. If you're interested, contact Drew Malin. Slate of candidates will be announced at the October General Assembly.
- Officer Installation Banquet will be held at the Silverwood Hotel, the 3rd Thursday of January 2007. Cost is \$15 per person; dress is business casual to formal.
- Rocky Mountain Federation Show report by Mike Wheat - CSMS Show was of superior quality to other Federation shows. The Federation would like to do another show with CSMS before 2010.
- Pick&Pack editors encouraged members to submit articles. Deadline for submission is 3rd Friday of the month. Contact Bill or Betty Cain.
- Drew received a request from a Harrisburg science teacher asking for mineral samples. If you would like to respond, please contact Drew for the details.
- A moment of silence was observed by those attending in honor of Marge Strait.

The general meeting was adjourned at 8:18 p.m., refreshments were enjoyed, followed Pete Modreski's presentation of "Pegmatites of Colorado and the World".

Badger Mountain—continued from page 5

towers, etc. At the wide parking area, hike up the trail a few hundred feet and start down the other side until the visitors center at Wilkerson Pass on highway 24 is visible below. You are now in a twisted bristlecone pine forest, a delightful place for a picnic.

BOB MADOLE'S BERYL (USGS Glentivar and Tarryall quads)



Earth Science Week Resources for Kids

By Jim Brace-Thompson, AFMS Junior Activities Chair

With October upon us, I'd like to draw your attention to Earth Science Week. This annual event has been sponsored by the American Geological Institute (AGI) since October 1998 to promote a better public understanding and appreciation of the earth sciences and, in the process, to encourage stewardship of our one-and-only planet. In addition to AGI, other sponsors and program partners include the U.S. Geological Survey (USGS), the National Park Service, NASA, the National Oceanic & Atmospheric Administration (NOAA), Earth Scope, Incorporated Research Institutions of Seismology (IRIS), The Weather Channel, and the American Association of Petroleum Geologists Foundation.

This year, Earth Science Week is **October 8-14** and has a theme of "Be a Citizen Scientist". The goal is to encourage everyone, not just academics and Ph.D. researchers, to take part in the earth sciences. And the AGI Earth Science Week web site (www.earthsciweek.org) provides ideas for how all of us can become scientifically literate citizens, helping to advance the field in ways great and small.

Of special interest to our junior members and the adults who mentor them, this web site has tabs "For Teachers" and "For Students". The Teachers tab takes you to more than 60 activities divided by grade level (grades K-4, 5-8, and 9-12) and all based on National Science Education Standards. The Students tab helps kids find Earth Science Week events near their communities, provides information on careers and what earth scientists do, gives guidance on entering Earth Science Week contests, provides an opportunity to earn an Earth Science Week Activity Patch, and more.

So run to the computer, type in www.earthsciweek.com, and open yet another window to helping kids learn while—as always—having fun!



Geoscience Adventure Classes

Cripple Creek Parks and Recreation Department



The Fossil Records: An Introduction to Paleontology

October 7, 2006 8:30 am to 5:30 pm

This outdoor-based class offers an unmatched opportunity to understand the basics of paleontology and the fascinating world of fossils. The Florissant Fossil Beds National Monument will be the center of our studies. The course fee includes two field trips, admission to the national monument, and a commercial collecting quarry.

Course fee: \$69.



Field Studies in Paleontology: Exploring the Shelf Road From Cripple Creek to Garden Park, Colorado

October 14, 2006 8:30 am to 5:30 pm

Starting in Cripple Creek, this field-oriented class offers an unsurpassed opportunity to explore the geological and paleontological wonders along the Shelf Road. The class will view the famous Garden Park dinosaur sites and examine dinosaur tracks. Transportation, course guide, admission to the Dinosaur Depot, and snacks are included. **Course fee: \$69.**



History and Geology of the Cripple Creek Mining District

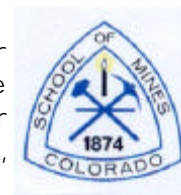
October 21, 2006 8:30 am to 5:30 pm

The Cripple Creek Mining District is one of the most interesting geologic regions in the country. In this field-oriented program, you will learn about the local geology and tour current operations at the Cresson surface mine. Be prepared for lively discussions and lots of fun as you explore the mining operations that are currently underway and learn about the mining history of this area. Transportation, course guide, and snacks are included. **Course fee: \$69.**



**To register call Cripple Creek Parks and Recreation today
719-689-3415**

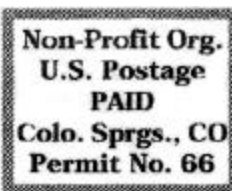
Participants may earn 0.5 graduate-level semester credit from the **Colorado School of Mines** for an extra fee for each class. This credit is optional. The credit is applicable for teacher license renewal in the State of Colorado and is generally accepted elsewhere. The additional fee for graduate credit from the Colorado School of Mines is \$30.00. This fee must be paid by check, payable to the Colorado School of Mines and given to the instructor.



Bill & Betty Cain, Editors



P.O. Box 2
Colorado Springs, CO 80901-0002



Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are the third (3rd) Thursday of each month, except August, beginning at 7:30 p.m. at the Colorado Springs Senior Center, 1514 North Hancock Blvd., Colorado Springs, CO. **Visitor are always welcome.**

CSMS also offers Satellite Group meetings that allow more focused attention in specific areas of our members' interests. Our current Satellite Groups consist of the following: Camera Club, Crystal Study Group, Faceting Group, Fossil Study Group, Jewelry Group, Lapidary Group, Micromounts Group, and Pebble Pups. For details of Satellite Group meetings, see page 10.

Yearly dues include 10 issues of the **PICK & PACK**, all field trips (additional fees may be required on some field trips, and members are responsible for all transportation to and from), participation in all Satellite Groups (some groups may request additional fees to help cover resource costs), free admission to the *Western Museum of Mining and Industry*, a year of learning and enjoyment, plus a lifetime of memories.

Individuals—\$20

Family—\$30

Juniors—\$2

If you are interested in joining CSMS or would like more information, we encourage you to attend our next General Assembly meeting (see page 2 for details of the next meeting) or visit our web site: www.csms.us