

PICK & PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

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Volume 45 Number 3

CSMS is an incorporated nonprofit 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.

The Bifurcation Expedition

A friend-filled road trip

Urban Turzi

For the past few years, a handful of collectors from Colorado and New Mexico have planned and executed an annual micro-mineral rendezvous. This year's expedition included Ron Gibbs (Silver City, New Mexico), Joan Beyer (Los Cruces, New Mexico), Eckhard Stuart (Mancos, Colorado) and Dee Rickey and myself (Colorado Springs). We all met near Mayer, Arizona the latter part of June 2004. Some of the participants of this adventure traveled 6-7 hours while others drove 13 hours to meet and camp under the largest cottonwood tree in northwestern Arizona.

Being senior citizens, some might guess we would have difficulty finding one another in the wilds of the Grand Canyon State. However, due to superb directions from our trip coordinator and party planner, Ron Gibbs,

all met within an hour or two of our planned time. Just to show you how good Ron's directions were, here is an excerpt from one of his emails: "After a short ways, the road crosses a drainage, turns north and bifurcates." After reading Ron's email, I had to respond to him and ask if "bifurcate" was a dirty word or what? His response was, "Bifurcate: to divide into two parts or branches. Can you locate the point of bifurcation on the topo map and the subsequent redirection of travel which leads to the end of the journey and point of campercation?" With a vocabulary like that, you would think Ron majored in English in college and not Geology. After a short night's sleep, we set off in the early hours of the morning of Saturday, 19 June, 2004, to the dumps of the nearby Cop-

See *Road Trip* on page 4

NATURAL SCIENCE

Fantastic Find in Madagascar Quartz Crystal!

Ferocious amphibians provide portal to ancient times

Russell Stevens

The paleontological world was rocked by an announcement made by a team of Chinese geologists this week. In a page taken from Steven Spielberg's *Jurassic Park*, the Chinese team announced the discovery of four live frog eggs found within a large fluid inclusion in a 200 million year old quartz crystal from Madagascar! The team of Chinese scientists was working at an undisclosed location deep in Umamma province of southern Madagascar, according to team leader Doctor I. M. Ly Ying.

The team was exploring a dark black shale deposit similar to deposits in Colombia, South America, that contain emeralds. While exploring a calcite vein cutting across the shale deposit, they encountered a vug containing calcite crystals together with some large quartz crystals with amethysts-



Quartz Crystal with frog egg. Inset photo is a close-up of egg after removal. © I. M. Ly Ying 2005

See *Crystals* on page 6

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Rick Copeland	Secretary
James Bushnell	Treasurer
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Ethan Bronner	Managing Editor
Louis Severini	Member at Large
John White	Member at Large
Bob Landgraf	Past President
Lorrie Hutchinson	Show Chairman
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Mineralogical Society
Founded in 1936



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PICK & PACK

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Ethan A. Bronner *Managing Editor*
Cindy Bronner *Assistant Editor*

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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 E-mail it. Format does not matter. All submissions are welcomed.

DEADLINE for items to be included in the next month's issue is the fourth 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. All photos will be returned. Electronic photos should be submitted at resolutions above 200 dpi in TIFF or PICT format.

Articles:

Mail, E-mail, or fax to the address and numbers below. ALL FORMATS ARE WELCOMED.

E-mail:

CSMSpickANDpack@msn.com

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Colorado Springs, CO 80903

Phone & Fax:

(719) 448-9949

For faxes no precalls are required.

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PRESIDENT'S CORNER

New CSMS Show Display Case Get Your Own

Drew Malin



the good work.

It goes without saying that we must have display cases for exhibits in order to have an interesting and successful show. I'd like to thank and congratulate Roger Pittman for designing and making a beautiful new display case for the club. We have sourced wholesale prices on all the components for this case and have gotten the price down to \$90.

The club wants to offer and encourage all of its members to buy a case of your very own!

We will charge only the cost of the materials (\$90), and, once we get enough people signed up, we have volunteers stand-

ing by to cut and assemble the cases for the members. Please consider buying a case; even if you don't have a current exhibit to display, your own case would encourage you to put a display together. It's much easier to do if you have the case standing by for measurements and special reference. If we can get a substantial number of members to buy their own cases, we will be able to offer our existing cases to visiting exhibitors. This should pump up the number of displays for this and all shows in the future!

We have confirmed that Michael Weiss of the Smithsonian will be attending our show this year. We had Michael speak at our show two years ago, and he was a resounding success. Special thanks to the Thompsons for their success at convincing Michael to attend again this year.

And finally, I hope everyone that can, will take advantage of the great field trip to Arkansas that Roger Pittman has set up for us. It sounds like the kind of trip that doesn't come around very often. Big thanks to Roger for setting this one up for us!

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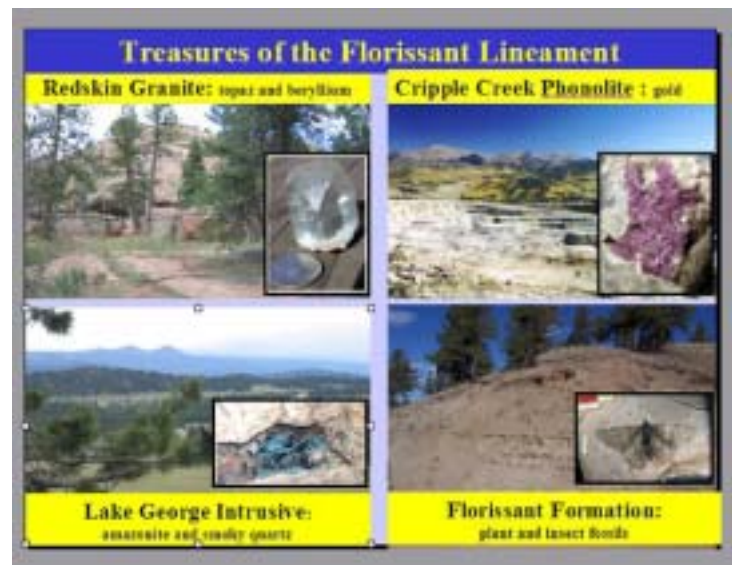
Treasures of Pikes Peak Backcountry: Order from Chaos

April's General Assembly

by Andy Weinzapfel and Steve Veatch

Pikes Peak backcountry has yielded four unique mineral and paleontological treasures: Cripple Creek gold, Florissant fossils, Lake George amazonite with smoky quartz, and Tarryall topaz with beryllium ore. One was first discovered by Utes and used in religious ceremonies. At least three were recognized by the late 1800s, and investigated in varying detail through field studies, geophysical measurements, drilling, and/or mining. These treasures are characterized by

Continued



considerable geologic diversity. One occurs in unusual igneous-extrusive rocks (volcanic phonolites), one in sedimentary lake beds, and two in zoned igneous-intrusive rocks (granites). Ages of occurrence vary greatly, from over 1 billion years ago to approximately 28 million years.

To date, these anomalies have been widely assumed to be separate and unrelated. This presentation challenges that view, suggesting there is a unifying, previously unrecognized geologic element that has influenced their location over a very long time. An old rupture of the earth's surface, henceforth named the Florissant Lineament, manifests itself as a fluorine anomaly connecting the four "pearls on a string" over a distance of 35 miles in approximately a straight line. This anomaly extends through the town of Florissant.

Emphasis of this presentation will be on the northern portion of the lineament,

where outstanding specimens of amazonite, smoky quartz, and topaz have been found. These treasures share a common genesis because they were once part of a volcanic chain, active about one billion years ago, extending from near Florissant- Lake George to the Lost Creek Wilderness region of the Tarryall Mountains.

Andy Weinzapfel is a geologist and a member of the CSMS. Steve Veatch is an adjunct professor of earth science at Emporia State University and a member of CSMS.

April 2005 General Assembly
Thursday, April 21, 2005, 7:30

Colorado Springs Senior Center
1514 North Hancock Blvd.

February's refreshments courtesy:
Lapidary Group

Minutes...

April 17, 2005

Drew Malin called the meeting to order at 7:42

Minutes accepted.

Treasurer's Report:

Normal cash outflows. Vendor money for show coming in. If people with family memberships want individual membership cards, please contact Jim Bushnell.

Satellite Groups:

Camera, crystal, faceting, fossil, lapidary, micromount, and jewelry group leaders announced dates, meeting locations and program for next month.

Show Report:

- Federation document ready for publication.
- Radio will be the primary advertisement.
- All dealer contracts out.
- New prototype showcase courtesy Roger Pittman. CSMS cases to be used by out of town contestants. Colorado Springs CSMS members can buy the new Pittman designed case for \$100 (cost of materials). Contact Roger Pittman (prpittman@netzero.com) if you are interested in buying a new case or want to volunteer to assemble them.
- Want to put together a fluorescent specimen display. All members who want to display specimens contact Boyd Cook or Steve Harris if interested.

Old Business:

Arkansas Quartz field trip. Contact Roger Pittman if interested.

New Business:

None.

The general meeting was adjourned at 8:00 followed by an informative video presentation, "Rhodochrosite: Red Treasure of the Rockies."

PASSINGS

Lawrence H. Rieth



Larry started his love of the great outdoors, April 22, 1917, Easter Sunday. Rock Hounding soon became a big part of his busy life, that he only slowed down a little in the past few years. Despite his failing health, Larry was an active member of the CSMS Camera Club, and kept up his interest in minerals.

Larry, his wife Lucille, and their three children joined the Colorado Springs Mineralogical Society about 1960. He served as president in 1964, 1965, and 1966. Larry's interests were micromounts, mineral collecting, photography, and lapidary. Through the years he led many fieldtrips. Since Larry was the fastest cross country walker the club has ever known, he truly lead these fieldtrips. The couple were lifetime members.

A little known tale about Larry happened at a meeting of the micromount group. When handed a specimen to examine, he just eyeballed it and said, "It's just Quartz," without even putting it under his scope. In response to his short-sighted comment, for over a year no one would share their quartz crystals - not septers, amethyst, Japan law twins, or even those with silver or gold wires - with Larry.

Larry's rock hunting here on earth ended on February 20, 2005. Those members who were lucky enough to know Larry Rieth will miss his great sense of humor and his love of life and fun.

- Jack and Kaye Thompson

EPA Sounds in on Gold Camp Road

As reported in the Thursday, March 31, 2005 edition of the Colorado Springs Gazette, the Denver office of the EPA recently sent a letter to Pike National Forest officials. The letter stated that the U.S. Forest Service's environmental impact statement had revealed potential environmental problems that should be addressed before opening Gold Camp Road to cars and trucks.

Among the EPA's specific concerns:

- The Forest Service's decision to reopen the road to traffic is "not well supported" in the impact statement.
- The Forest Service impact statement lacks an analysis of the numbers and types of vehicles that would use Gold Camp Road.
- The Forest Service should explain how it will mitigate the increased flow of sediment into the creeks if vehicles are allowed and new trails are built.
- The Forest Service should quantify the amount of dust that will be released under the various scenarios in which vehicles will be allowed.
- Increased motorized use on Gold Camp Road would have "significant impacts" to wildlife and fisheries in the Cheyenne Canyon area, part of a larger designated as critical habitat for the Mexican Spotted Owl.

Frank Landis, who has been leading the process to reopen this area for the Pikes Peak Ranger District, notes that the EPA's letter is one of over 300 comments submitted since the process began. The EPA does not have any regulatory authority in the decision. Like all of the other public comments, the EPA's comments can only be considered suggestions.

It should be no surprise that the Trails and Open Spaces Coalition said that the EPA's concerns seemed to pose the same issue their group has raised since the beginning, that the Forest Service hasn't made a good case for why Gold Camp Road should be reopened to cars and trucks.

The final decision for this issue remains to be the responsibility of the Forest Service. Their final report is due in June of 2005.

Road Trip Continued from page 1

per Queen Mine. Just prior to breaking camp, our in-house commando, Eckhard, had to dispatch a scorpion despite the protests of the Animal Rights activists in our group. Easy pickin's is not something we are used to but we did find some beautiful azurite (blades and rosettes) and fine acicular olivenite, malachite and pseudomalachite prior to our lunch break.

After lunch, we drove a few miles with our 4x4's locked in low range to the Old Robertson Claim where we collected underground for more olivenite and some nice cornwallite. My favorite mineral to collect is carminite and I will kill to get a nice specimen of this colorful reddish mineral. Of course, we have comedians in our group and Eckhard had to show off his sense of humor and give me a heart attack when he explained, as my headlamp died because of dead batteries, "Holy smokes, this is the nicest carminite I ever saw." I immediately did my Braille impression on the sides of the dark tunnel of the Old Robertson and became the source of great amusement to my lying friend.

That night we drove a few hours to a nice camp spot in the Kaibab National Forest and were treated to some homemade chili that Sister Joan of the Micromounters brought with her. Getting to the various mine and camping sites required that we open and close fences erected by ranchers. On this trip, we instituted a practice whereby we tipped the person that opened and closed the gates to the fenced land. Joan came up the winner as the gatekeeper who made the most money on the trip: twenty-seven cents. Our group is not known for being big tipplers.

And speaking of Joan: she is a devoted Catholic who never misses Mass, even when we collect. However, on this trip, she not only requested and received a Papal dispensation from me but she also ate an ice cream cone on the second day (Sunday) of our expedition.....oh, the wages of sin!

While I am poking fun at my friends, I might as well unload on Dee. She has a habit of getting folks' names mixed up every now and also has a slight propensity to talk a tiny bit. So the quote of the day from Dee was, "I hate people that talk all the time." Also, it came as no surprise that I was called Ron or Tom several times, while Ron was called Urb, and Joan was addressed as June or Jane in Dee's best North Carolina hillbilly accent.

Our second day of collecting found us in the Mojave Desert on the outskirts of Baker, in San Bernadino County, California in the 'shade' of the Joshua trees and large barrel cactus at the Mohawk Mine. We went underground in the "T" tunnel and, using our hand

lens, we spotted conichalcite, beudantite, hematite after scorodite, cuprian austinite, jarosite and hetaerolite in the samples of rocks. Eckhard managed to find some fine malachite after cuprite octahedrons.

That night, as we made our traditional dinner of "whatever you brought in a can, just throw in the pot" special, Joan gave us the quote of the day when she announced, "Enantiomorphic means a mineral can have both right or left handed crystal forms." Since that impressed us so much, she gained a new name, i.e., Sister Joan of the Enantiomorphic Order of Perpetual Micro-minerals. Big deal, so what if she has a Masters in Geology!

The next morning, Monday, 21 June 2004, we collected underground in the West Adit of the Mohawk Mine and found some nice aurichalcite but had better luck collecting on the dump where we identified adamite, malachite, and carminite (yes, I was thrilled as I found this beauty).

After lunch, we headed for Nevada. On our way we stopped in Tecopa, Inyo County, California to take advantage of this tiny hamlet's free-for-the-use hot springs. Having not showered since Friday morning, we thought we were in seventh heaven. After our baths, we came out to our vehicles to be treated to a fireworks display by the local fire department. We did the obligatory "ooh and ahhh's" despite the fact it was one o'clock in the afternoon. The quote for the day came from Eckhard, who was born in Germany, when he remarked, "No vonder da springs are hot, it's 130 degrees in this town."

That afternoon, we traveled to the outskirts of Tonopah, Nevada. For one reason or another, our trip this day was slowed down because one male member of our group was enthralled with certain "ranches" that we passed on the highway. Names like the Cotton Tail and the Whoopie Doo should give you a clue to the type of clientele these establishments cater to.

We reached our campsite about dusk, so we set up camp, ate and marveled at another beautiful western sunset. After dinner we walked into the main pit of the Tonopah Divide Mine. Risky it was but we had good flashlights to guide our steps. Our reason for the evening trek was to find an outcrop of powellite. Eckhard carried his florescent light with him and that helped us find the powellite. Noting the location, we went back next morning and pounded on the rocks until they yielded powellite, fluorapatite, and beautiful green chlorargyrite crystals.

Our next destination was Rhyolite Pass, in the vicinity of Luning, Nevada, where we collected rocks from the dumps of this site.

Continued on next page

We are interested in small minerals, but this spot has to take the prize for the smallest of the small crystal forms. However, what it lacked in size it made up in beauty and wonder (I wonder what this minerals is?). To get an idea of specific locations and a better description of the minerals we collected, you might visit this website: www.geocities.com/yedlinite.

On Wednesday morning we headed out for Lovelock, Nevada. Much of that day is a blur to me as I had a super size case of Montezuma's Revenge and spent the day either asleep or moaning. My friends found annabergite, spangolite and other minerals that I can't remember as I made no notes that day. I do remember that we had to travel over two hours from Lovelock to our campsite and collecting spot in Cotton Wood Canyon. On the way, we came upon a small herd of wild horses. What a majestic sight they were, especially the mare and her colt.

The next morning, Thursday, was time for some goodbyes. Dee and I were heading back to Colorado, while the other three amigos were going on to Pollock Pines, California for the annual Northern California Micro-Mineral Symposium. Surviving emotionally filled "high fives," hugs and handshakes, and promises to email one another once we all got home, we parted ways.

Before we made it back onto Interstate 80, Dee and I stopped at the Willard Mine and poked through the sooty black slate and found some nice white fluellite and some other unidentified phosphate minerals.

After an hour at this productive spot, we headed east on the interstate and exited at the Iron Point Mining District to try our luck at the Silver Coin Mine. We were joined at the Silver Coin by two friendly bats and a horde of mosquitoes. We stayed there a very

short time as the bats apparently had their fill of the "skeeters" and left about two thousand of the buzzing, hungry pests to feast on our exposed dirty skin. It is amazing how fast you can fill your backpack up with rocks when you have flying, biting insects assisting you.

I have not had a chance to look at the specimens from this spot but the website lists about 20 different minerals, most of which I will not be able to identify.

Once safe in my truck, we headed for the Nevada/Utah state line where we spent a night in the Red Garter Motel and our second shower in a week. Next morning, Friday, it took us about 12 hours to venture home through some beautiful country. When we pulled up to my home that evening, after 2,730 miles of travel, my grandkids all greeted us with, "Hey Pop, did you find any rocks?"

Final ponderings: This was one of the best collecting trips I have ever been on. Of course, the fellowship was unbeatable, which makes the difference, but we were quite successful in finding some very nice minerals. Each evening of our expedition, our group sat around our non-existent campfire to discuss our families, our minerals, quotes from Doctor Science, the sites we saw each day, the fine people in our lives and the "not so" fine people in our lives. An example of the latter would be our foreign acquaintance from the northern climes (i.e. Canada) who, fortunately, was unable to join us on this trip. However, to let him know how much we thought of him, we did toast him at our campsite at the Mohawk Mine with a bottle of fine ale that he once sent to me as a gift (Arrogant Bastard Ale is the actual name of the brew)...The name of the ale may have a strong resemblance to our Royal Canadian mate, ehhhh!

The author is a member of the CSMS.



CSMS Silent Auction

Sutton's minerals make an exciting addition

As a fund raiser to help us with the finances for this year's show, the CSMS held a silent auction on Saturday, April 4th at the Embassy Suites. Thanks to Urban Turzi's generous donation, those who attended got a chance to bid on historic rich items from the estate of CSMS founding member Leonard Sutton. These were just some of many choice items that went on the auction block. We want to thank all the members who donated items and those who purchased them.



AFMS Code of Ethics

- I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.
- I will keep informed on all laws, regulations or rules governing collecting on public lands and will observe them.
- I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind such as fences, signs, buildings, etc.
- I will leave all gates as found.
- I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material - matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.
- I will not contaminate wells, creeks, or other water supplies.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
- I will cooperate with field-trip leaders and those in designated authority in all collecting areas.
- I will report to my club or federation officers, Bureau of Land Management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
- I will appreciate and protect our heritage of natural resources.
- I will observe the "Golden Rule," will use Good Outdoor Manners and will at all times conduct myself in a manner which will add to the stature and public image of rockhounds everywhere.

Revised July 7, 1999 at the AFMS Annual Meeting

FEDERATION NEWS

Swapping Materials

Michael Kessler
EFMLS Region II Vice President

I have been trying to find people who are interested in trading specimens through the mail. I started a Federation Box Swap some time ago in my region of New York and New Jersey. Many clubs weren't interested because they shared the same sites. It was suggested that I try clubs outside the region, and that is the reason for this article.

The plan was to have a club, or a member, pack a box with self-collected mineral specimens, labeled, and ready to travel. The total weight should be as close to ten pounds as possible. When the package is ready for mailing, contact me for the address to be placed on that package and I will give your address to those mailing theirs out. I have two boxes waiting so far from New York, New Jersey and Pennsylvania. See if someone may be interested, and please let me know.

Specimens, such as these, could be used for prizes, for raffles, or for auctions. Remember to inform those involved that the specimens should be cushioned for travel, and should be of a quality that they would also like to receive. I am only accepting boxes from members of AFMS Clubs. Anyone interested, please contact

Michael Kessler

EFMLS Region II Vice President

quartz7228@aol.com

4 Longfellow Road

East Stroudsburg, PA 18301

From: A.F.M.S News, February 2005

tine tips. These quartz crystals had exceptionally large fluid inclusions, one of which contained several round objects. The crystal was sawed, and the objects removed and placed in a container in their enclosing fluid. Under microscopic examination, they appeared to be eggs of some kind. Almost immediately the eggs began to develop the characteristic tail and shape of tadpoles, according to a stunned Dr. Ying who realized he was witness to the birth of living creatures that had been extinct in nature for millions of years.

The tadpoles continued to grow, and their carnivorous nature was revealed when a large moth landed in their container and was instantly torn to bits! Trying various foods, Dr. Ying discovered they especially liked meal worms, ants, and sesame chicken. At the end of



© I M Ly
Ying 2005

three days, incredibly, the tadpoles were over seven inches long, with large, serrated, triangular, shark-like teeth.

It was at this point, that Dr. Ying and his team realized that they had made one of mankind's most important and priceless discoveries. They stood in awe of what they had uncovered and discussed at length how the most could be made of this discovery, and benefit come to the peoples of Madagascar and China. Two weeks later, the team had defected to the U.S., with four, now fully grown, 17 inch long frogs, which were sold to Disney World, Orlando, for an undisclosed sum. Dr. Ying could not be reached for further comment, as he was vacationing in Maui.

The author is a member of the CSMS.



Salidans find gem pocket on Mt. Antero

Largest pocket ever found on mountain

Arlene Shovald

A search for aquamarine on Mt. Antero led to the discovery of a significant gem pocket yielding smoky quartz crystals and plates – some plates weighing more than 500 pounds and measuring 3-by-5-feet. “There are also some unusual mineral specimens being unearthed, such as green chloride-included quartz clusters and plates,” Rick Tekancic, one of the three discoverers, said. “We have found no aquamarines, but the possibility of aqua as well as other gems is good.”

Tekancic and his partners, Brandon Henderson and Stuart Gehrke, call the find a significant scientific and historic discov-

ery.

Until this discovery, the largest gem pocket on 14,269 foot Mt. Antero was discovered by two locals in 1978 and was about the size of a telephone booth, hence its name, The Telephone Booth. It did not produce many aquamarines, but did produce a number of fine smoky quartz crystals.

“In August my partners and I went back up the mountain to re-work a pocket we discovered in 1995,” Tekancic said. “After breaking a wall of solid granite and

punching through a block of quartz, we hit what seemed to be just another pocket, but

Continued



Stuart Gehrke, left, and Rick Tekancic at the entrance of their mine on Mt. Antero.
Courtesy photo:

after days of beating against the block of quartz, with a 12-pound sledge hammer and chisel, the opening yielded the largest gem pocket ever found on the mountain." The pocket measures about 14 feet wide by 20 feet long. The height is unknown. The gem pocket has been dubbed The Subway because of its size and the fact that it is underground in solid granite.

Aside from the physical challenge of getting at the gems through the granite, mining at 12,000-14,000 feet provides a major challenge to the prospectors. In a world of beauty and harshness, prospectors have spent the past century on Mt. Antero dodging electrical storms, hurricane force wind and year round blizzards, in addition to the challenges of the altitude, to search for "the big find."

Tekancic and his partners feel they've met the challenge with the discovery of The Subway. "The Subway is what is known as a weathered or collapsed pocket," Tekancic

said. "Over thousands of years, the crystals and gems collapsed in on themselves, then the surrounding feldspar and granite decomposed and also fell in."

The pocket, filled with decomposed feldspar and granite, is being excavated and is producing the smoky quartz crystals and plates.

The three prospectors are moving slowly and methodically as they investigate their find, hoping some elusive aquamarines may still be discovered.

Specimens from this historic find may become available in limited amounts as soon as laboratory evaluations are completed. Anyone interested in specimens or expeditions to the site can contact Tekancic at mtn5@hotmail.com or (719) 207-2307.

Source: The Mountain Mail, November 9, 2004, www.themountainmail.com

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Migmatites

A Mixture of Igneous and Metamorphic Rocks

Steven Wade Veatch

Metamorphism transforms pre-existing rocks into distinctly new rocks (metamorphic) as the result of high temperatures and high pressures. Metamorphic rocks, when raised to temperatures and pressures at or near their melting point, form a migmatite—a rock that has almost melted and characteristically produces a



This migmatite, a mixture of igneous and metamorphic rocks, is actually a glacial erratic deposited by a retreating glacier at the end of the Ice Age in the Rocky Mountain National Park. This migmatite is along the shore of Sprague Lake. Photo date Aug, 2004, by S. Veatch.

fantastic display of mixed igneous and metamorphic rocks.

A migmatite, intermediate between metamorphic and igneous rocks, is a mixed rock in which at least **one part is igneous**.

High temperatures cause partial melting with



The swirled banding of light-colored felsic minerals and dark-colored mafic minerals seen in this boulder are characteristic of a migmatite. Photo date Aug, 2004, by S. Veatch.

segregation of granitic melt bands that form swirled banding. This banding reveals that the light colored minerals (felsic) have undergone melting and flow while the dark colored minerals (mafic) have not yet reached their melting point and have been contorted by flow. If a rock undergoes extensive metamorphism and light and dark minerals have been segregated, it is gneiss. If a rock undergoes partial melting with segregation of granitic melt bands it is a migmatite. To find out if a rock is a migmatite, carefully look at the felsic layers. If they have completely melted and re-crystallized, the rock is a migmatite. If re-melting has not taken place, it's a gneiss.

The author is a member of the CSMS.

Peter J. Modreski's Earth Science Coming EVENTS

April 22-24, Wichita, KS

52nd annual "Gemstone Artistry," Cessna Activity Center, 2744 George Washington Blvd. Sponsored by The Wichita Gem & Mineral Society. Show chairman: Gene Maggard 316-742-3746. www.geocities.com/wgms2001

May 6-8, McPherson, KS

13th annual Rockhounds Rock Swap, 4-H Fairgrounds Woodside & Hickory. Contact: Marvin Lundquist, 441 N Charles, McPherson KS 67460, 620-241-7003 or Jim Nutter, 1601 Jody Lane, McPherson KS 67460, 620-241-2433.

May 7-9, Grand Junction, CO

58th Annual Gem, Mineral & Jewelry Show, "Mesa County Barite," Two Rivers Convention Center, 1st and Main, Grand Junction Gem & Mineral Club, Inc. Show Chairmen: Gary and Pat Briels, 301 Kava Way, Grand Junction, CO 81503, Phone 970-245-7925.

May 20-22, Elinwood, KS

32nd annual Rock Swap, City Park (Northwest Corner of Elinwood), Hosted by the Elinwood Chamber of Commerce. For more information 620-564-3300

May 28 - 29, Lakeside, AZ

11th annual Gem, Mineral and Jewelry Show of the White Mountain Gem & Mineral Club of Show Low, Arizona. Held at Blue Ridge Jr. High School. Contact Tonie MonDragon, Show Chairman (928)537-8855 or tmondragon@citlink.net

MINERAL SALE

April 30th & May 1st
Saturday & Sunday

10 AM - 4 PM
at our garage

7513 Tudor Rd, CS. CO
Take 1-25 Exit #149

Selected from our collection
and trade stock
Hundreds of crystals to choose.
Most are \$1 to \$50.

Ray & Eloise Berry
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For Sale

Lapidary Journal Magazines,
1973 through 1980,
96 magazines total.
Some missing back covers; other-
wise excellent condition. \$80.00.
Contact Rick Copeland
rick.copeland@covad.net
719-594-6121

Science Fair


The CSMS participated again this year
in the Pikes Peak Regional Science
Fair, which is held annually at the
University of Colorado at Colorado
Springs. The CSMS gives Special
Awards to science fair participants
with the best displays on topics
relevant to our mission.

All winners receive a one-year
membership to the Colorado Springs
Mineralogical Society and prize
money. This year, the judges decided
to divide the prize money equally
among the winners and eliminate
declaring individual place winners.

- Kathryn Bell, 6th grade, Mt. Ridge
- Samantha Wadsworth, 6th grd, Mt. Ridge
- John Meluso, 8th grd, North
- Jeremy Bowlin, 8th grd, West
- Ben Cohn, 9th grd, Palmer
- Kristyn Rodzinyak, 12th grd, Rampart

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Steve & Peggy Willman - Minerals Sangre de Cristo Gallery

114 Main Street, Westcliffe, CO 81252
email: gallery@ris.net 719-783-9459
Fall Hours: Friday & Saturday 10:00 to 5:00

Collectable minerals, fossils, crafts & local artists



THE ULTIMATE FLORISSANT FOSSIL BEDS NATIONAL MONUMENT EXPERIENCE

May 7, 2005



This outdoor-based class offers an unmatched opportunity to understand the basics of paleontology and the volcanic setting of the Florissant Fossil Beds National Monument. The diversity and large number of well-preserved specimens from the Florissant Formation (including over 1700 described species of plants, arthropods, fish, birds, and mammals) makes it one of the richest fossil assemblages in the world. The ancient redwood stumps (some of the largest fossilized tree stumps in the world) are impressive examples of preservation through a volcanic mudflow and include the world's only known fossilized "trio" (three stumps from a common base).

- Explore sites of paleontological interest in the park.
- Experience an in-depth examination of the early geological surveys and scientific exploration of the fossil beds.
- Review collection techniques and field photography.
- leaves, fruits, and insects by splitting the paper shales of the Florissant Formation at the Florissant Fossil Quarry. Take home the fossils you find! No collecting permitted at the national monument.
- Learn about the discovery and careful excavation of a Columbian mammoth at the fossil beds.
- Visit the Hornbek homestead and learn about the role of women in the settlement of the Rocky Mountain West.
- Discover the monument's important components of the history of agriculture, ranching, and tourism of the Pikes Peak region.

ism of the Pikes Peak region.

Explore the archaeology of the area and learn that the lands that are now the Florissant Fossil Beds National Monument were, and continue to be, an important part of the traditional use area of the Ute people.

This class will fill quickly. **Call the Cripple Creek Park and Recreation office today at (719) 689-3514** to reserve your spot in this adventure class. The course fee is \$35.00, and includes park admission, expedition notebook, and transportation from Cripple Creek. If you wish to stay after the class, Cripple Creek offers many interesting diversions in the evening. Please call the J.P. McGill's/Midnight Rose Casino at 1-800-635-5825 to reserve your room for the night. You must ask for the special rate (\$69.99+ tax) for Florissant Fossil Beds class. Your hotel fee includes a complimentary full breakfast and free parking. The class will begin at 8:30 am at the June Hack Recreation Center in downtown Cripple Creek. Participants will board a park and recreation bus and head for an overlook of the Thirty-nine Mile volcanic field. The next stop will be the Florissant Fossil Beds National Monument where the rest of the day will be spent attending presentations and exploring selected trails in the monument. Please bring a sack lunch to enjoy at noon and then explore the bookstore in the visitor center. The bus will return to Cripple Creek around 5:50 p.m. **Come and experience the Florissant Fossil Beds National Monument!**

Board Meeting: 1st Wednesday @ 7:00
Drew Malin: 531-7594

April's meeting again will be at the usual place at the regular time.

Camera Club: 4th Tuesday @ 7:15
 1514 North Hancock, C/S
Roger Pittman: 683-2603

Camera Club meets on the fourth Tuesday of each month at the senior Center. April's subject will be "Pictures of Minerals taken at a show." May's subject will be "Clouds."

Crystal Study Group: 2nd Friday @ 7:30
 1514 North Hancock, C/S
Kerry Burroughs: 634-4576

The crystal group will be putting together the CSMS case. Please bring your specimens.

Jewelry Group: 3rd Saturday @ Noon-4:00
 6608 Gambol Quail Drive East, C/S
Rick Copeland: 594-6293

The Jewelry subgroup will meet Saturday, April 16, from noon to 4:00 at Rick Copeland's, 6608 Gambol Quail Dr E. Subject: bracelet construction.

Faceting Group: 4th Monday @ 7:00
Dave Wilson: 635-7891

The April meeting of the faceting group will be Monday, April 25th at 7 pm at Jim Bushnell's office, 2950 North Academy.

Fossil Study Group: 4th Thursday @7:30
John Harrington: 599-0989

Fossil meeting will be deferred for the program "Global Climate Change" at the Tutt Science Center, at Colorado College, by Friends of the Florissant Fossil Beds at 7:00 on the 28th of April.

Lapidary Group: 1st Saturday @ Noon
 3085 Rhapsody Drive, C/S
Drew Malin: 531-7594

The April Lapidary meeting has been replaced by the CSMS Silent Auction. The May meeting will resume at its normal place and time.

Micromounts: 2nd Tuesday @ 7:00
 1514 North Hancock, C/S
Phil McCollum acc@frii.comm
Moyra Lyne: 442-2673

President	Drew Malin	531-7594	advanceone@adelphia.net
Vice President	Rick Olson	531-7818	RickPat66@aol.com
Secretary	Rick Copeland	594-6293	rick.copeland@covad.net
Treasurer	James Bushnell	598-9262	bushy@pyramidpeak.com
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Member-at-Large	John White	630-0300	bluski2222@msn.com
Past President	Robert Landgraf	687-3195	RMLWP74@aol.com
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Field Trip Director	Brent Williams	632-3552	zaphod1863@yahoo.com
Librarian	Mary O'Donnell	689-7209	mod4185@compuserve.com
Camera Club	Roger Pittman	683-2603	rpittman@netzero.com
Crystal Study	Kerry Burroughs	634-4576	kburroug@adelphia.net
Faceting Group	Dave Wilson	635-7891	dlwilson@pcsisys.net
Fossil Group	John Harrington	599-0989	harrington1@mindspring.com
Lapidary Group	Drew Malin	531-7594	advanceone@adelphia.net
Micromount	Phil McCollum		acc@frii.com
Jewelry	Rick Copeland	332-7915	rick.copeland@covad.net

Events

- 2 **Apr - Saturday, Noon**
Silent Auction
- 6 **Apr - Wednesday, 7:00**
Board Meeting
- 8 **Apr - Friday, 7:30**
Crystal Study Group
- 12 **Apr - Tuesday, 7:30**
Micromounts Group
- 16 **Apr - Saturday, Noon**
Jewelry Group
- 21 **Apr - Thursday, 7:30**
General Assembly
- 25 **Apr - Monday, 7:00**
Faceting Group
- 26 **Apr - Tuesday, 7:15**
Camera Group
- 28 **Apr - Thursday, 7:30**
Fossil Group
- 4 **May - Wednesday, 7:00**
Board Meeting
- 7 **May - Saturday, Noon**
Lapidary Group
- 10 **May - Tuesday, 7:30**
Micromounts Group
- 13 **May - Friday, 7:30**
Crystal Study Group
- 19 **May - Thursday, 7:30**
General Assembly
- 21 **May - Saturday, Noon**
Jewelry Group
- 23 **May - Monday, 7:00**
Faceting Group
- 24 **May - Tuesday, 7:15**
Camera Group
- 26 **May - Thursday, 7:30**
Fossil Group
- 17-19 **June - Fri, Sat, Sun.**
Pikes Peak Gem and Mineral Show, The Rocky Mountain Federation of Mineralogical Societies 2005 Convention, & the Rocky Mountain Micromineral Symposium

Ethan A. Bronner, Editor



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Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are the third (3rd) Thursday of each month, except August, 7:30 p.m. at the Colorado Springs Senior Center, 1514 North Hancock Blvd., Colorado Springs, CO. **Visitors 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, Lapidary Group, Jewelry Group. For details of Satellite Group meetings, see page 9.

Yearly Dues include the 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 - \$15.00 Family - \$25.00 Juniors - \$2.00

If you are interested in joining the 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 website: www.csms.us