



PICK&PACK

THE BULLETIN OF THE COLORADO SPRINGS MINERALOGICAL SOCIETY Published Since 1960

Colorado Springs
Mineralogical Society
Founded in 1936

Lazard Cahn
Honorary President
March 2017
PICK&PACK

Vol 57... Number #2

CSMS General Meeting

Thursday, March 16, 7:00 PM

This month's speaker is Ernie Hanlon,

2017 President of CSMS

Topic: Mineral Collecting in Colorado Part 2

Refreshments provided by the Faceting Group

Reminder: There will be organizational meetings for the June show at 6PM on March 2 prior to the board meeting and at 6PM on March 16 prior to the General Assembly

****In case of inclement weather, please call the Senior Center at 719 955-3400 to make sure it's open****

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Last month Ernie Hanlon gave a great presentation on his 30+ years of mineral collecting. His use of humor and history was entertaining and enlightening. Please see the February General Assembly Minutes on page 9 for more details and examples from his talk.

This month, Ernie will present Part 2 of his career in mineral collecting in Colorado. He will bring a case of world-wide Rhodochrosite, and he is providing a Wichita Case to display part of Jack and Kaye Thompson's collection.

Ernie Hanlon's February 16, 2017 presentation



Photo by Frank Rosenberg

COLORADO SPRINGS MINERALOGICAL SOCIETY PO BOX 2 COLORADO SPRINGS, COLORADO 80901-0002

CSMS Calendar

April & May 2017

Thu., **Mar 2 & Apr 6**—**Board Meeting**, 7 p.m., Senior Center

Tue., **Mar 7 & Apr 4**—**Fossil Group**, 7 p.m., Senior Center. Jerry Suchan, 303 648-3410

Thu., **Mar 9 & Apr 13**—**Faceting Group**, 7 p.m., Senior Center. Paul Berry, 719 578-5466

Thu., **Mar 16 & Apr 20**—**Pebble Pups & Juniors**, 5:30- 6:15 p.m., Sr. Ctr. Steve Veatch, 719 748-5010

Thu., **Mar 16 & Apr 20**—**General Assembly**, 7 p.m., Senior Center

Thu., **Mar 23 & Apr 27**—**Crystal Group**, 7 p.m., Senior Center. Kevin Witte, 719 638-7919

Note: The Micromount Group is not meeting at this time. If you are interested in meeting, please call Dave Olsen, 719 495-8720

Appointment Only—**Jewelry Group**, Bill Arnson, 719 337-8070

Appointment Only—**Lapidary Group**, Sharon Holte, 719 217-5683

The Senior Center is located at **1514 North Hancock** in Colorado Springs. For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to our website, csms1936.com

Upcoming Events of Interest to CSMS Members

Submitted by Pete Modreski

Thurs., Mar. 2, 4:00 p.m., Van Tuyl Lecture at Colorado School of Mines, **Oklahoma Earthquakes, Injection of Produced Water, and Hydraulic Fracturing**, by Jeremy Boak, Oklahoma Geological Survey. Berthoud Hall Room 241, all are welcome. For the complete Van Tuyl schedule see http://inside.mines.edu/GE_Lecture-Series.

Thurs., Mar. 2, 7:00 p.m., **Collecting Microminerals**, by Richard Parsons. Friends of the Colorado School of Mines Geology Museum's "First Thursday" lecture series on the CSM campus in the Ben H. Parker Student Center, Ballroom E, Maple Street, Golden. Socializing begins at 6:30 PM and the lecture will start at 7:00. Admission is free and all are welcome.

Sat.-Sun., March 4-5, **Journey to the Jurassic – Exploring the Morrison Formation**, WIPS (Western Interior Paleontological Society) 10th Founders Symposium. Green Center, Colorado School of Mines campus, Golden.

Thurs, Mar. 16, 7:00 p.m., monthly meeting of the Colorado Scientific Society, featuring a talk by Will Yeck, National Earthquake Information Center, USGS: **The Far-Reaching Effects of Wastewater Injection: Recent Case Studies of Anthropogenic Earthquakes**. At Shepherd of the Hills Church, 11500 W. 20th Ave., Lakewood. All are welcome. Social time 6:30, meeting begins at 7.

Fri.-Sat.-Sun., Mar. 31-Apr. 2, **Fort Collins Gem & Mineral Show**, sponsored by the Fort Collins Rockhounds Club, at the McKee 4-H Building, Larimer County Fairgrounds/The Ranch, I-25 exit 259. 4-8 p.m. Fri., 9-6 Sat., 10-5 Sun.

Fri., Apr. 14, 6:45 p.m., **North Jeffco Gem & Mineral Club Silent Auction**. APEX Community Center, 6842 Wadsworth Blvd., Arvada. Setup at 5:30, auction begins at 6:45. All are invited.

(Continued on page 5)

KÖTTIGITE: AN ARSENATE OF BEAUTY

Mike Nelson csrockguy@yahoo.com

Life is full of beauty. Notice it. Notice the bumble bee, the small child, and the smiling faces. Smell the rain, [see the small minerals] and feel the wind. Live your life to the fullest potential, and fight for your dreams. Ashley Smith

The arsenates are perhaps my favorite group of minerals, and along with the phosphates and vanadates, have received several coverages in my writings (i.e. copper arsenates: olivenite and clinoclase and cornwallite; and copper, zinc arsenate: austinite; cobalt arsenate: erythrite; lead arsenate: mimetite; nickel arsenate: annabergite). In these three groups, arsenic (As) or phosphorous (P) or vanadium (V) combine with oxygen (O) to form the arsenate (AsO_4), phosphate (PO_4) and vanadate (VO_4) radicals. Each of these radicals, with a negative charge of 3^- then combines with a positive charged cation metal(s) and often with water (H_2O) or hydroxide (OH) to form a wide variety of minerals. Since the three radicals are approximately the same size they often substitute for one another in a solid solution series. For example, pyromorphite [lead phosphate $[\text{Pb}_5(\text{PO}_4)_3\text{Cl}]$] is in solid solution with mimetite [lead arsenate $[\text{Pb}_5(\text{AsO}_4)_3\text{Cl}]$]. The latter mineral is usually a pale yellow to yellow-brown color while pyromorphite is usually green to yellow-green in color; however, intermediate stages in the solid solution series are known (from work with XRD or EDS or other gizmos). Each of these radical groups may also combine with a variety of metals that often form solid solution series with each other. For example, erythrite [cobalt arsenate] is in a complete solid solution series with annabergite [nickel arsenate] as the cobalt cation substitutes for the nickel cation: $\text{Co}_3(\text{AsO}_4)_2 \cdot 8(\text{H}_2\text{O})$ to $\text{Ni}_3(\text{AsO}_4)_2 \cdot 8(\text{H}_2\text{O})$. Therefore, it is easy to understand the wide range, number and variety of arsenate, phosphate and vanadate minerals when so many combinations of cations and radicals are possible.

Many arsenate—phosphate—vanadate minerals are bright in color, have easily observable crystals and are widely available at mineral shows. Therefore, I am a sucker, actually a buyer, whenever these minerals are located at shows (if the price is right)!

I once described pink erythrite (cobalt arsenate) and green annabergite (nickel arsenate) and noted that a zinc arsenate mineral called köttigite is the zinc analogue $[\text{Zn}_3(\text{AsO}_4)_2 \cdot \text{H}_2\text{O}]$ of both minerals. Therefore, I have been on the lookout for this fairly rare mineral and was delighted when I was able to pick up three small specimens at \$1 each (a great price) collected from the Mina Ojuela, Mapimí, Durango, México. Moore and Megaw (2003) described the Ojuela Mine as Mexico's greatest mineral locality with 117 species known from the deposit including the world's finest adamite (in a gorgeous array of colors and habits), legrandite, kottigite/parasymplectite, and paradamite, as well as superb specimens of scorodite, hemimorphite, plattnerite, aurichalcite, rosasite, fluorite, calcite, wulfenite and other species. Mina Ojuela is also the type locality for paradamite, lotharmeyerite, metaköttigite, mapimite and ojuelaite, and the co-type locality for scrutinivite. The area was first mined by Spanish invaders in 1598 and was commercially mined for 350 years. Today a few specimen miners still haunt the drifts and adits.

Bob Jones, one of my heroes in the world of minerals, noted in his 2011 book entitled *The Frugal Collector* that "of all the species from the Ojuela mine, perhaps the least eye-appealing is köttigite, which is a relatively dull blue-gray mineral." Hero or not, I do not agree with Bob's opinion! I consider my three specimens as quite appealing and beautiful with very nice sprays of prismatic crystals (See Figs. 1-3 on Page 4).

(Continued on page 5)



February 16, 2017 General Assembly photos by Frank Rosenberg

By
Mike Nelson



Fig. 1. Spray of köttigite crystals showing a distinct color variation from bottom (blue-gray) to top (clear). This variation may be due to the amount of iron replacing zinc. The S is water-clear selenite gypsum. The ? are probably larger crystals of köttigite while the “yellow” mass is unknown. Photomicrograph width FOV ~1.5 cm.



Fig. 2. The dark blue-gray center spray of köttigite is very iron rich while a smaller spray to the left has rather clear crystals. The S is selenite gypsum while the G is goethite. Photomicrograph width FOV is ~1.5 cm.

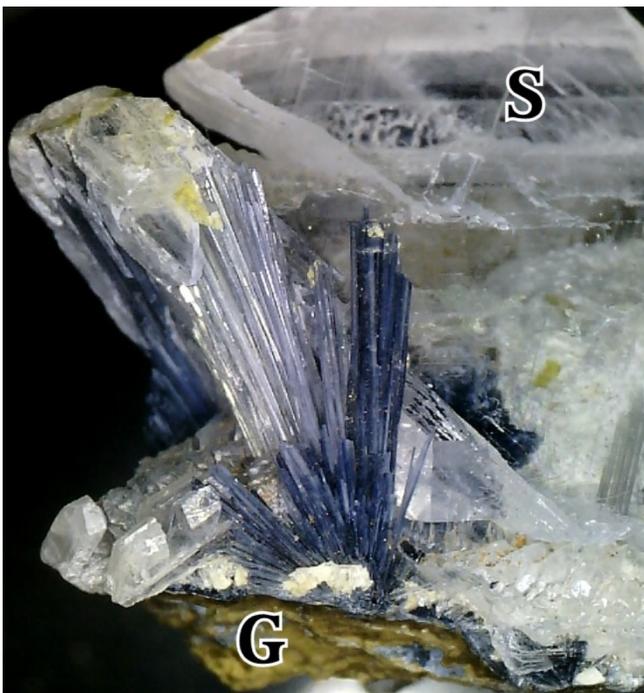


Fig. 3. Mixed color spray of köttigite and water-clear selenite gypsum (S) and goethite (G). Width FOV ~1 cm.

(CONTINUED FROM PAGE 3)

Köttigite, according to MinDat, should have colorless crystals but due to substituting chromophores it shows a variety of colors ranging from red to red-orange to brown to rose pink to gray to gray blue (and probably more). The prismatic crystals have a silky to waxy luster, are soft (2.5-3.0), are flexible and are transparent to translucent. The mineral may also appear as encrusting rather than forming nice prismatic crystals.

Köttigite is formed in the oxidized zone of polymineral ore deposits by the alteration of primary hypogene minerals skutterudite [CoAs₂] and sphalerite [ZnS]. Köttigite is the zinc analogue of, and in solid solution with, erythrite (cobalt arsenate) and parasymplectite (iron arsenate). In fact, as köttigite obtains more and more iron the crystals become gray to light green to blue to greenish black and as I understand the situation, it is almost impossible to visually distinguish between köttigite and parasymplectite in many/most specimens. Therefore, some technical journals use a hyphenated mineral name unless a chemical analysis has been completed. In addition, köttigite (Monoclinic Crystal System) is a dimorph (same chemical formula but different crystal system) with metaköttigite (Triclinic Crystal System).

I have learned much from this little project, especially about how the swapping of metallic cations and substitutions of the radicals can produce an amazing number of minerals. But most importantly, I learned how to produce, in WORD, a diacritical mark called an umlaut. You have all seen an umlaut, those two little dots over a vowel as in köttigite indicating “a partial assimilation to a succeeding sound. Used primarily in German.” If you really want to pronounce köttigite correctly go to www.webmineral.com and type in the name and look for the voice button.

I tried to learn German one time about a decade ago—spent six weeks taking a class in Germany. This exercise was a tough assignment and about the only actions learned were phrases to order dark beer, sausage and pig knuckles, and bread. On the final day of class our instructor took us to a nice outdoor café for lunch and we needed to converse with the staff—in German. OK, I ordered food and beer but what about more conversation? So with my very limited vocabulary I asked the wait staff if she would like to go dancing on the beach in the moonlight! That was about the only sentence I could muster except one telling her about my dog and his name. I think my instructor was humiliated; however, I did receive an extra dessert from the staff!

REFERENCES CITED

Moore, T.P. and P.K.M. Megaw, 2003, Famous mineral localities: The Ojuela Mine, Mapimí, Durango, Mexico: Mineralogical Record, v. 34, September.

As for the beauty of köttigite I like the words of Tadao Ando: *you can't really say what is beautiful about a place [mineral], but the image of the place [mineral] will remain vividly with you.*

(CONTINUED FROM PAGE 2)

Fri.-Sat.-Sun., Apr. 14-16, Colorado Mineral and Fossil Spring Show, Crowne Plaza Hotel - Airport, 15500 E. 40th Ave. Denver, CO. See <http://www.rockygems.com/colorado-mineral--fossil-spring-show-2017.html> .

Sat., May 13, Friends of Mineralogy, Colorado Chapter, Silent Auction. Clements Community Center, 1580 Yarrow St., Lakewood CO, 12:00-4:00 (setup begins at 10:30 a.m., auction begins at 12:00, verbal auction 1:00, all tables will close by 3:00 p.m., checkout follows).

Fri.-Sat.-Sun., June 2-4, Pikes Peak Gem & Mineral Show, sponsored by the Colorado Springs Mineralogical Society. At Mortgage Solutions Financial Expo Center, 3650 N. Nevada Ave., Colorado Springs.

Fri.–Mon., July 21-24, Gold and Silver Deposits in Colorado, a symposium cosponsored by the Friends of the Colorado School of Mines Geology Museum and DREGS (Denver Region Exploration Geologists Society). “The event will feature two days of talks (July 22 - 23) and two days of field trips (July 21 and 24) to historic Colorado gold and silver mining areas.”

Notes on the Geology of Colorado Fishing

By

Steven Wade Veatch

A stream, as a geological agent, is one of the most powerful forces on Earth. Many of Colorado's magnificent landscapes are the products of what streams do best—moving sediments sporadically downstream in regular cycles of erosion and deposition. In Colorado, the Continental Divide splits streams that flow west to the Pacific Ocean from those that flow eastward to the Atlantic and the Gulf of Mexico. The sparkling streams of Colorado not only shape the landscape but also provide great fishing. A deeper understanding of the riparian environment and geologic processes will enhance every fishing trip.

Snowmelt gives rise to Colorado's four major river systems: the Platte, the Arkansas, the Rio Grande, and the Colorado. Here is a quick review of those rivers.

The South Platte begins in the high country of South Park, but when it reaches the Cheesman Canyon, south of Deckers, local geology creates some remarkable places to fish. Granite formed in the canyon under enormous pressure several kilometers below the surface and was later exposed by regional uplift. With the erosion of the overlying rock, the granite expanded and cracked due to the release of pressure. Gravity now causes the rock between the cracks in the granite to break loose in concentric slabs from the underlying granite body. This process, exfoliation, results in the rounded nature of the granite outcrops in the canyon.

Granite boulders, slabs, and gravel form bars across the South Platte that dissipate the energy of the flow, producing areas of calm water and deep pools in Cheesman Canyon. Willows grow along the banks while aspens and spruce trees grow tall, providing shade for brown trout. Because browns are very selective in what they eat, they are hard to catch and grow to a large size. Anglers on this river frequently use small flies, especially the pheasant-tail fly.

The Arkansas River starts in the mountains near Leadville and Tennessee Pass and flows south and east to merge with the Mississippi in the state of Arkansas. After spring runoff has reworked sand and gravel bars, fresh gold placers can be panned on the upper reaches of the Arkansas. As the Arkansas River flows by the Texas Creek recreation area on its way to the Royal Gorge, brown trout can be caught with caddis flies. The Texas Creek area is also noted for deposits of rose quartz associated with pegmatite (coarsely crystalline) granite that intruded into metamorphic rocks.

The Rio Grande River has its headwaters in the San Juan Mountains and flows through New Mexico on its way to the Gulf of Mexico. Near Creede, at Wagon Wheel Gap, the Rio Grande offers excellent fishing for browns, brooks, rainbows, and cutthroats using a prince nymph. Cutthroat trout like slow pools that are just opposite large granite boulders. There are several geothermal springs in the area, and excellent specimens of fluorite occur nearby.

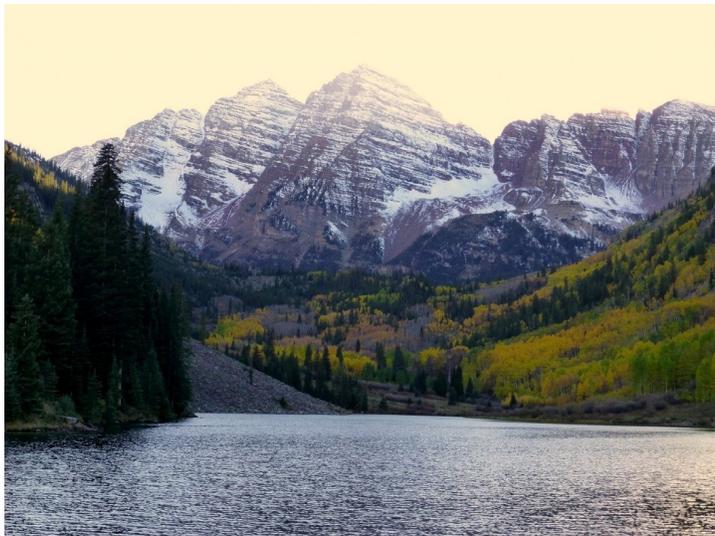
The Colorado River drains the western slope of the Continental Divide and empties into the Gulf of California. The major tributaries of the Colorado River are the San Juan, White, Yampa, and Gunnison Rivers.



The Gunnison River began downcutting into the Earth after a period of regional uplift 28 million years ago. Today steep Precambrian gneiss (metamorphic rock) walls, with pink pegmatite dikes filling cracks and fissures, rise thousands of feet above the Gunnison River in the Black Canyon. Geological processes here have produced the best fishing spot in the state. It is the only place in Colorado where browns and rainbows grow to 16 inches in just four years. Anglers in this area commonly use big nymphs.

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Geologic processes have created 1,800 lakes above 9,000 feet in elevation in Colorado. Many of these high-country lakes, called tarns, occupy the bottoms of amphitheater-shaped cirques where glaciers eroded into the mountain. If there are enough insects to eat and the lake is deep enough for the fish to winter, there will be a population of trout. Trout are not always easy to catch in high lakes as they feed along the edges and can be easily spooked. Brook trout—commonly found in high country lakes, beaver ponds, and small creeks—tend to be small because they reproduce rapidly and surpass their food supply.

Trout like to cruise most of the 11,300 miles of streams in Colorado, and if anglers consider the rock and understand the role that geology plays in fishing, they have an advantage for catching trout. It is “gneiss” to know that fishing and geology can’t be taken for “granite.”

THIRTY FIVE YEARS OF MINERAL COLLECTING AND STILL COUNTING

Ray Berry is an Amateur Geologist/Mineralogist with professional abilities in field collecting in the Pikes Peak pegmatites. This book relates his many years of finding exceptional, museum quality crystals almost exclusively in the famed pegmatites in Pikes Peak granite.

He relates his (and his wife, Eloise’s) experiences arriving in the Colorado Springs area in 1970 knowing absolutely nothing about minerals or crystals and how they became interested in finding these elusive gems. Ray is a 46 year member of the Colorado Springs Mineralogical Society, and a 25 year member of Friends of Mineralogy Colorado Chapter. Some of his fellow collectors swear he can “smell” a pocket that is three feet deep!



Ray collecting on his Bob and Ray Claim, August 2011
photo courtesy Frank Rosenberg

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PEBBLE PUPS CORNER



CSMS Pebble Pups & Junior Group

The Junior Group & Pebble Pups meet at the Senior Center every third Thursday at 5:30 PM until 6:15 PM or so. We only meet during the academic year, and we include January. So, it is Sept through May. Special announcements and field trips are noted on our blog <http://pebblepups.blogspot.com> and through the CSMS website.

As we mentioned last month, the following story is very interesting and worthy of publication. Due to space constraints in the print edition of the newsletter, it will appear in three installments. Please bear with your editor as we try to find logical breaks in the story where the interruption isn't too distracting. We will also try to find a way to post it on the website in its entirety.

The Rudist Fossil Story

By Jack Shimon (adapted from a presentation given at the Denver Gem Show, September 17, 2016)

When I was 6-1/2 years old my Grandpa took me fossil hunting in central Texas. We went to a limestone quarry that he had visited earlier and was given permission to enter and collect from. This was one of my first fossil hunting trips and I really enjoyed it. The reef we went to (now a quarry) had huge boulders of limestone and tube like things in it later to be found out as rudists.



Photo credit: Mike Hursey

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2017 CSMS Officers

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 Mike Webb, Field Trip Coordinator
 TBD, Science Fair Chair
 Frank & Ellie Rosenberg, Librarians
 TBD, Social Committee Chair
 Ann Proctor, Store Keeper
 Michael Kosc, Webmaster
 Mike Nelson, Federation Representative
 Ernie Hanlon, Federation Representative

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

Feb. Crystal	Mar. Faceting	Apr. Fossil
May Jewelry	June Lapidary	July Micromount
Aug. No Meeting	Sept. Board	Oct. Crystal
Nov. Faceting	Dec. Christmas Party	

SECRETARY'S SPOT by Barbara Middlemist

General Meeting Minutes for the Colorado Springs Mineralogical Society —February 16, 2017

General Meeting Minutes
of the Colorado Springs, Mineralogical Society
February 16, 2017.

The new president, Ernie Hanlon, called the meeting to order at 7:04, followed by the pledge of allegiance.

The evening's program was **Collecting in Colorado**, presented by long time member and president Ernie Hanlon.

Ernie showed pictures of his original set of rock collecting tools. A small set compared to the car full of tools some of us carry today. Ernie has collected an impressive variety of specimens in Colorado, among them topaz, zircon, rhodochrosite, calcite, amazonite, epidote and barite from Hartsell where the club still goes today. He showed some of the original members prospecting at collecting sites near here. Many of these collecting sites have changed dramatically. Most are no longer available for collecting.

Among his first finds was smoky quartz from Lake George, he showed photos of before and after cleanup. He brought a display case with some beautiful smoky quartz that he collected in those early days.

Ernie told us a story of caution. When he was beginning his collecting, he found a beautiful crystal specimen. It was misidentified as one that could be cleaned in acid. After cleaning, there was nothing left but residue. The lesson is, never clean your best specimen first, find a small piece and experiment on it.

Another lesson is, should you be lucky enough to find that illusive crystal pocket, bring soft material to protect your crystals while you remove the crystals from the pocket. Ernie told a story of finding one of his first pockets while totally unprepared. He improvised and removed nearly all his clothing. He used these to put in the pocket. Protecting the crystals came first.

He showed pictures of how destructive it can be to a digging site if people are not respectful of the land. One of the pictures showed huge holes, downed trees and destroyed landscape. He reminded us all to remember to follow the prospecting rules that are taught at the club.

A plaque was presented to 2016 president Jean Luce.

The 2017 executive committee board members were introduced.

Reports:

-It was reported that there are no updates on club claim.

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-Sharon Holte reported on the club webpage. It is nearly complete. Setting up anonymous email addresses on the webpage may be difficult. The web designer is investigating. The old webpage has proved difficult to remove and still shows up in a search.

Group Leads were introduced.

-Micromount Lead David Olson reported that the micromount group would no longer meet. Attendance is down to one member. Meetings will resume if there is increased interest.

-Fossil Lead Jerry Suchan said the topic of the next meeting would be dinosaurs. Meetings are the 1st Tuesday.

-Kevin Witte, co lead of the crystal group, said that at the next meeting a video of Herkimer diamond collecting would be shown. Also, a black light would be available to view fluorescent rocks.

-Faceting – anyone interested in learning the art of faceting will be happy to know the Y offers a class at the senior center for people of all ages. Faceting group meets on the 2nd Thursday.

-Jewelry Lead Bill Arnson announced that since he is retired he would love to share his free time with those who wish to come over and make jewelry. Call for an appointment.

- Lapidary Lead Sharon Holte announced that lapidary equipment for cutting rocks is available at her house. Call for an appointment.

-Librarian Frank Rosenberg discussed how to check out material from the library.

-New business

Report on Lanyards – Norma Alexander reported the club was approached to buy lanyards to offer to the members. The members were not interested.

Yam Yamiokoski made the motion that the club pay a stipend to members representing the club as federation representatives. Discussion followed. If there is no problem with the IRS, the club will pursue this motion. Members expressed a favorable reaction.

Meeting was adjourned at 8:30.

Names were drawn for door prizes. Ernie donated two of his specimens for prizes. Thank you Ernie.

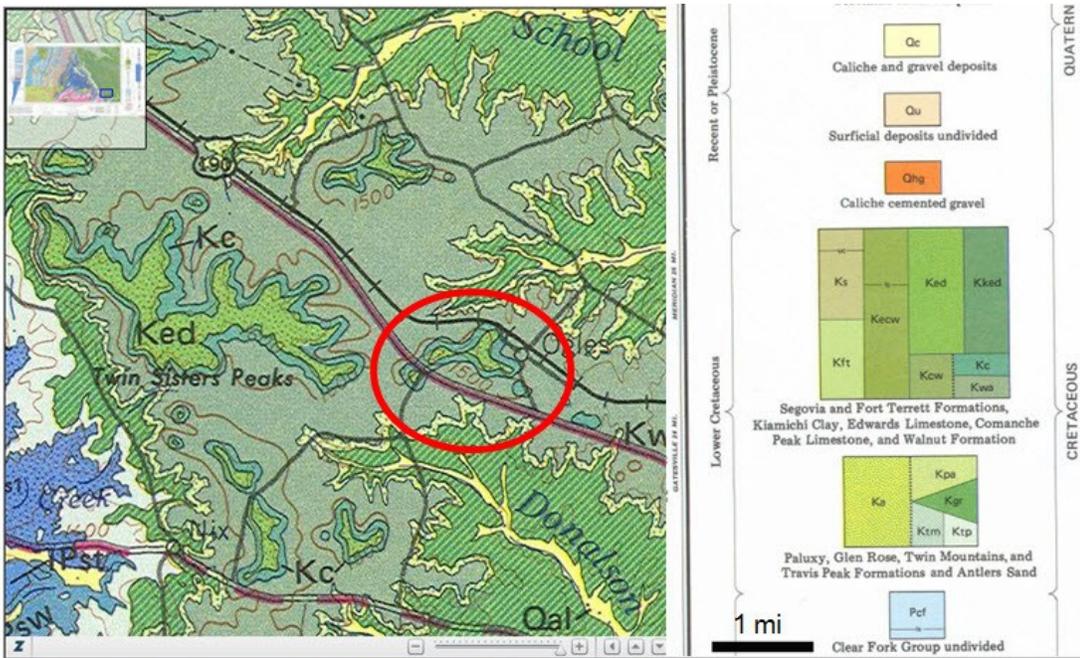
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“Thirty-five Years of Mineral Collecting and Still Counting, will give encouragement to every field collector that there are still many mineral treasures to be discovered. Ray’s examples throughout this memoir are undeniable support of his advice: “I have constantly told novices that they should not allow others to tell them; ‘There is nothing on that hill.’” The reader will see that there is often something on that hill as well as on many other undiscovered hills in the 1,200 square-mile Pikes Peak Batholith. Ray’s words and finds should be inspiration to all of us who follow in the tracks of this remarkable man” is a quote from Joseph L. Dorris, Glacier Peak Mining and TV show Prospector.

There are more than 95 full color photographs of his self-collected minerals, most keyed to his descriptions of finding them! All photos by the author. Permissions; write to Raymond Berry, 7513 Tudor Rd., Colorado Springs, CO., 80919. The book is available on line at lulu.com: ISBN 978-1-365-51601-6.

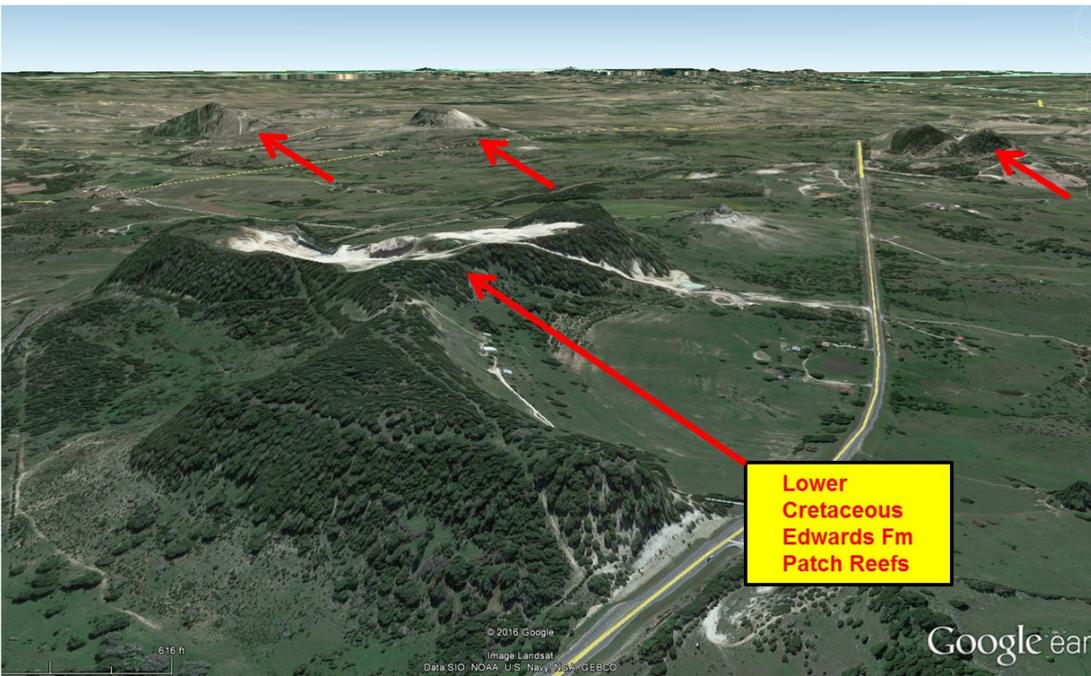
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In this geologic map you can see the tri-lobate reef we collected from in the red circle. The age is lower Cretaceous Edwards Formation.



Permission to use image courtesy of the Texas Water Board

This Google satellite image shows the reef we collected from. Two of the three lobes have been excavated for limestone. You can also see smaller pinnacle reefs marked with the short arrows. All of the reefs rise above the flat Texas landscape.

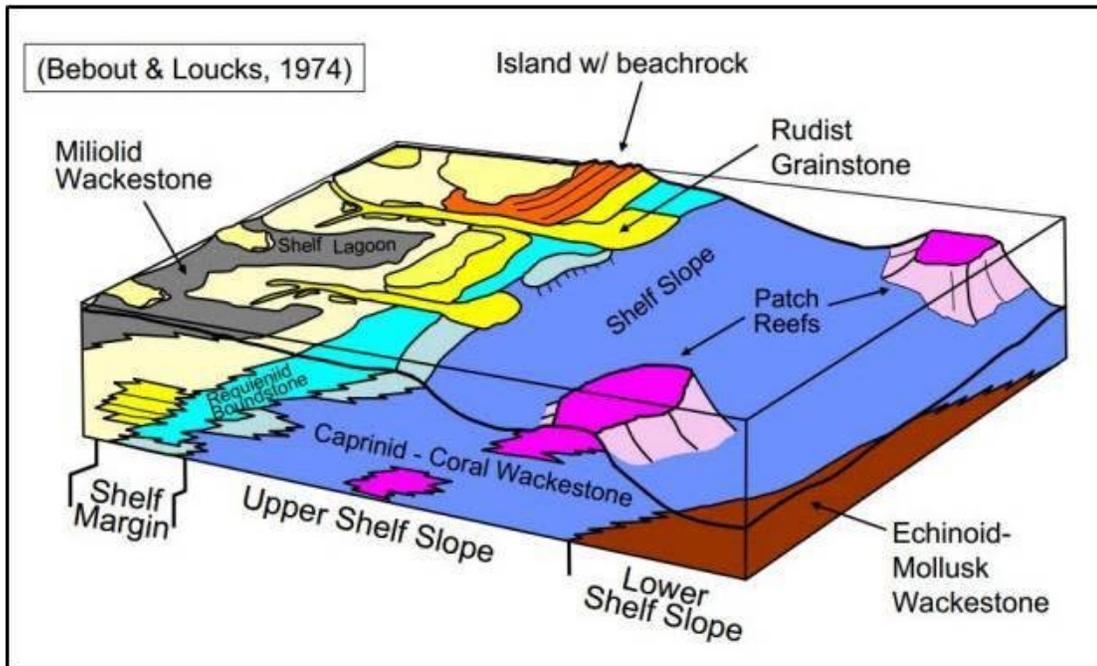


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In this diagram of patch reefs you can see the shelf slope and how the reefs containing fossils rise up from the slope but are still underwater creating a shallow marine environment. This is what the central Texas landscape looked like when my fossils were alive and living in the sea.



Permission to use from AAPG under the Special Fair Use Guidelines. Credit to the authors D.G. Bebout and R.G. Loucks

Discovering a cool fossil: We found these large fossilized colonies around the top of the quarry; probably moved there during quarry operations. We thought they were a primary reef building organism but did not think they were coral because of their unusual morphology.



Photo credits: Mike Hursey

Our Staff... Larry Jones—Editor

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

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

Handwrite it, type it, or email it. Format does not matter. All submissions are welcomed. The DEADLINE for items to be included in the next Pick & Pack, is the **20th of the month**

To submit an item:
For hardcopy photos or articles, mail to the address below or bring them to the General Meeting. All hardcopy 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 are preferred in Word. Editor will correct font.

E-Mail to:
csmseditor@hotmail.com

Mail to:
Pick & Pack Editor
PO Box 2
Colorado Springs, CO 80901

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CSMS

T-Shirts, Badges, and Pins

are available for sale. If you celebrated a CSMS anniversary in 2015 or 2016, you are eligible for your one year pin award. Please see Storekeeper, Ann Proctor

Classifieds

Turquoise, Crystals & much more!



Fort Collins Rockhounds
P.O. Box 272777
Fort Collins, CO 80527

- Exhibits • Door Prizes
- Grab Bags • Silent Auction
- Demonstrations
- Gem & Mineral Dealers

North Jeffco Gem & Mineral Club Silent Auction

Friday, April 14th, 2017
APEX Community Recreation Center
6842 Wadsworth Blvd, Arvada, CO 80003

Setup at 5:30 PM

Seller limits on number of items to sell:
Club Members – No limit
Non-members – Maximum of 30 items

Auction Begins 6:45 PM

Checkout Begins Immediately After Auction
No Early Checkout
Free Parking, Free Admission

♦ jewelry ♦ gems ♦ minerals ♦
♦ bake sale ♦ crafts ♦
♦ free refreshments ♦
♦ public invited ♦

If you need a finished piece of jewelry, rough material to fashion yourself, a specimen for your collection, or an interesting and fun evening, this is the place.

Sellers & Buyers Welcome

For more info call Bill Jones 303-503-6288
Or email sidewindermin@comcast.net

54th Annual Pikes Peak Gem, Mineral, and Jewelry Show

Featuring Pyrite

Fri. & Sat., June 2-3, 2017, 10:00-5:00 / Sun., June 4, 2017, 10:00-4:00
Adults \$5.00 / Kids 12 & Under FREE

MORTGAGE SOLUTIONS
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- Land Status Research
- Certificate and Map Preparation
- Mapping Existing Claims
- Claim Lines Marked

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PICK&PACK
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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 10 times each year to assist and promote the above.

Joining the Colorado Springs Mineralogical Society (CSMS):

Meetings are held the **third (3rd) Thursday of each month**, except January & August, **7:00 p.m.** at the Colorado Springs Senior Center, 1514 North Hancock Ave., 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: Crystal Study Group, Faceting Group, Fossil Group, Jewelry Group, Lapidary Group, Micromounts Group, and Pebble Pups/Juniors. For details on Satellite Group meetings, check out the calendars on page 2 and the web site.

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 & Industry*, a year of learning and enjoyment, plus a lifetime of memories.

Individuals—\$30, Family—\$40, Juniors—\$15, Corporate—\$100, *****Application is on the web site.

If you are interested in joining CSMS or would like more information, we encourage you to attend our next General Meeting or visit our web site: www.csms1936.com

CSMS is a Member of the following organizations:

American Federation of Mineralogical Societies (AFMS)

www.amfed.org

Rocky Mountain Federation of Mineralogical Societies (RMFMS)

www.rmfm.org