

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.

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A Preliminary Study on a Large Scraper from Central Wyoming

By Luke Sattler,

Colorado Springs Mineralogical Society Junior Member

This paper is about an unusual artifact from Wyoming that may have been used by prehistoric people. The artifact has been studied and the preliminary research results are completed.

This ancient scraper is a bifacial, thinned, cortical flaked tool which means that its flakes were striken from the exterior of a chert nodule (hence the remaining cortex, or rough surface, visible on one face, Figure 1). To make it bifacial, the edges were then flaked on both sides to form a cutting or scraping edge used for cutting things like meat, hide and other things (Walker, Danny, Personal communication 2012).

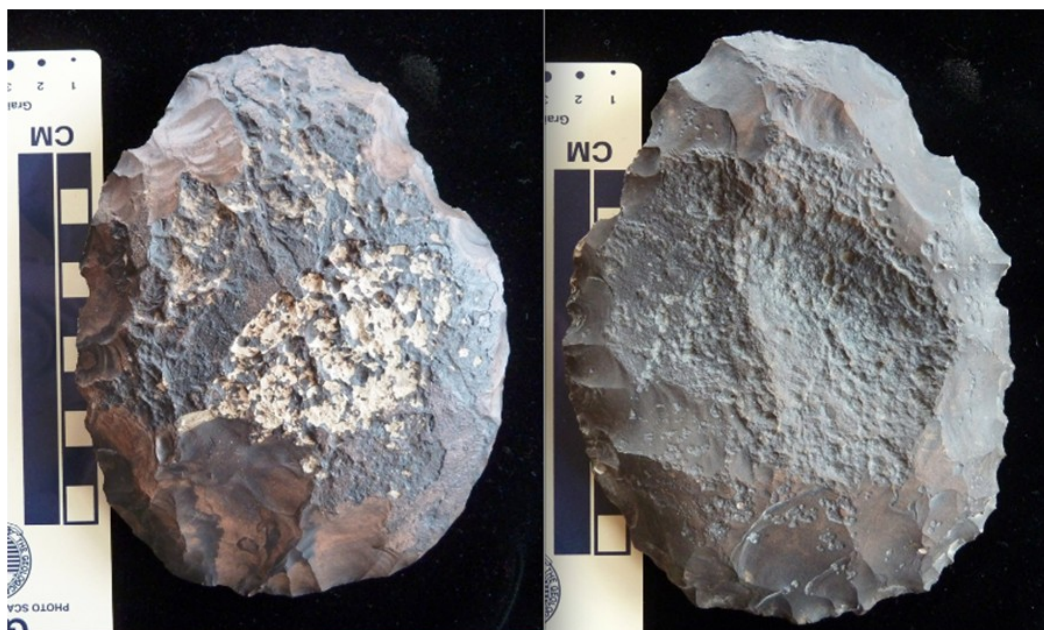


Figure 1. Front and back view of bifacial scraper showing flacking by ancient people in Wyoming. Rough surface of a chert nodule is revealed on the surface. S. Veatch photo © 2012.

The scraper is made out of chert: a sedimentary microcrystalline variety of quartz that forms when microcrystals of silicon dioxide grow within sediments. The microcrystals grow into irregularly shaped nodules or concretions as dissolved silica is transported to the formation site by the movement of ground water or seas. When there is more than one nodule or concretion forming they may join together and form large masses or layers of bedded chert. Some of the silicon dioxide in chert is thought to have a biological origin. In some oceans and shallow seas large numbers of organisms that have a silica rich skeleton may form these chert formations because the silica rich skeletons or "spicules" such as sponges break down

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May 2012 CSMS Calendar	
Tue., May 1—Fossil Group, 7 p.m., Senior Center. Nelson, Leader, csrock-guy@yahoo.com	Thurs., May 3—Board Meeting, 7 p.m., Senior Center.
Sat-Sun, May 5-6—Ray Berry Mineral Sale— 7513 Tudor Rd CS, CO.	Sat, May 5—Field Trip, Fountain Creek, See Web site for details Dave Olsen, Leader, 719.495.8720
Tue., May 8—Micromounts, 7 p.m., Senior Center. Dave Olsen, Leader, 719.495.8720	Sat-Sun, May 12-13 —Field Trip , Hondo Canyon, See Web site for details
Thurs., May 17—General Assembly, Martin Guth- Fluorescent Minerals The Reason Why 6:30 p.m. Show Meeting 7 p.m., Senior Center. 65:15 p.m. to 7615 p.m. Pebble Pups & Juniors. Steven Veatch, Leader, 719.748.5010	Thurs., May 24—Crystal Group, 7 p.m., Senior Center. – Program TBD, Kerry Burroughs, Leader, 719.210-6389 Faceting Group, 7 p.m., Senior Center. Paul Berry, Leader, 719.578.5466
Sat., May—Lapidary— By appointment. If you would like to cut stones, call Sharon Holte at 217.5683 for an appointment.	May, Jewelry Group, By appointment only. Please call, Bill Arnson, Leader, 719.337-8070 to schedule a mutually agreeable time. 15610 Alta Plaza Cir., Peyton.
Project Group—TBD— contact Ron "Yam" Yamiolkoski, yamofthewest@gmail.com	Camera Club is looking for a leader and meeting place, date and time. Interested? Contact Roger Pittman.
For more information on any of the sub-groups, meetings, and other CSMS valuable information, go to our website, csms.us	The Senior Center is located at 1514 North Hancock in Colorado Springs.

Hondo Canyon Field Trip

By Ellie Rosenbury

Marge Regel led a fantastic field trip to Hondo Canyon near Taos New Mexico. When Marge says you need a high clearance 4-wheel drive vehicle you better believe you do. Our Expedition bottomed out several times and more than a few times we all got out in order to fill in the deep ruts with the plentiful rocks along the track. We were able to drive fairly close to the collecting area. It was just ¼ mile walk to the trail leading up the mountain where the schist outcrop containing the staurolites is. Some beautiful staurolite crosses were found as well as many X's. The Marge Regel, Sharon Holte, Kevin & Vickie Witte, Yam, Debbie Ropken, Roni Poteat, and Ellie & Frank Rosenberg. Look at the pictures below. Don't you wish you had come? P.S. Marge and Sharon found Fossil Hill and collected many nice fossils

June 2012 CSMS Calendar	
Tue., Jun 5—Fossil Group, No meeting Nelson, Leader, csrock-guy@yahoo.com	Thurs., Jun 7—Board Meeting, 7 p.m., Senior Center.
Tue., Jun 12—Micromounts, 7 p.m., Senior Center. Dave Olsen, Leader, 719.495.8720	Thurs., Jun 21—General Assembly, Pete Modreski – Colorado Diamonds 7 p.m., Senior Center. 6:30 p.m. to 7:15 p.m. / Pebble Pups—canceled until September. Meetings will resume in Sep.
Crystal Group, No meetings over summer. Regular meetings resume in September. Kerry Burroughs, Leader, 719.210-6389 Faceting Group, 7 p.m., Senior Center. Paul Berry, Leader, 719.578.5466	Jun, Jewelry Group, By appointment only. Please call, Bill Arnson, Leader, 719.337-8070 to schedule a mutually agreeable time. 15610 Alta Plaza Cir., Peyton.
Sat., Jun—Lapidary— RSVP please. If you would like to cut stones, call Sharon Holte at 217.5683 for an appointment.	Camera Club is looking for a leader and meeting place, date and time. Interested? Contact Roger Pittman.
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after the organisms die and when their skeletons fall to the bottom of the sea, dissolve, recrystallize and sometimes become chert nodules or chert layers ("Chert," 2012)

The chert artifact appears to be pre-Shoshone or pre-Lakota, but more studies at the site need to be done. The historical Shoshone were nomadic people who traveled over portions of the western United States. They occupied parts of Colorado, Wyoming, Nevada, Montana and Arizona. The Shoshone people were hunters and gathers; their diet consisted of berries, roots, pine nuts, rabbit, antelope, and buffalo and their housing consisted of buffalo hide teepees. This scraper would have been a valuable and versatile tool. Shoshone clothing changed between the different seasons; from men wearing just a breech cloth around their waist and women wearing an apron in the summer to wearing rabbit fur jackets and pants—even buffalo hide capes in the winter.

The Shoshone tribe (Figure 2) may have used this scraper for a variety of uses, but most likely to cut meat and hide for making clothes and other useful things ("Shoshone life," 2012). It was Sacagawea—a Shoshone who gained notoriety as the famous Native American who helped lead Lewis and Clark on their expedition through Shoshone lands. The Lakota peoples may have used the scraper. There are many things in common that the Lakota's have with the Shoshone such as: 1) the Lakota were also nomadic peoples who also hunted mainly buffalo and other small animals like deer and antelope; and 2) the Shoshone and the Lakota both lived in teepees most of the time ("Lakota Indian facts," 2012).

To conclude, many historical artifacts in museums have a "no information tag" for where they came from or who made them. But as scientists our job is to try and think outside the box and use our information at hand and our best knowledge to establish as many facts about our finds, either in the field or a box in the basement of a museum, and figure out what happened or may have happened—and that is what I did in this paper.

References Cited:

Chert. (2012, March 21). Retrieved from <http://geology.com/rocks/chert.shtml>

Lakota Indian facts. (2012, March 22). Retrieved from http://www.bigorin.org/Lakota_kids.htm

Shoshone life. (2012, March 21). Retrieved from http://www.shashoneindian.com/shashone_life.htm

Walker, Danny, (2012, March 12). (Note: Walker is assistant Wyoming State Archaeologist) Interview by Luke Sattler [Personal Interview]. Wyoming artifact. Scraper Question Email, USA.



Figure 2. Shoshone family. Photo courtesy of the author.



"Witnessing the Republicans and the Democrats bicker over the U.S. debt is like watching two drunks argue over a bar bill on the Titanic."

Author the author:

Luke has been faithfully attending meetings of the Colorado Springs Mineralogical Society's Pebble Pup/Junior meetings for over three years. He has made many contributions to the programs, brings rocks and minerals to share with the other youth members, has helped the instructor on many occasions, and has articles and research papers published in international magazines and local newspapers. He is a skilled researcher in the geosciences.

The End

More Pictures—Hondo Canyon



NEW LOCATION FOR DICK'S ROCK SHOP

Now OPEN

Moving is no easy task. Finding an agreeable location for furniture, family, and "family pets" is difficult enough. With a business, consideration for clients is significantly high on the list. Throw in the need to find a home for a couple ton of rocks and it becomes a whole new challenge.

Diana Wing, owner of Dick's Rock Shop, has once again taken on that mission for the nearly 34 year fixture in the Fountain Valley. The family business, encouraged by an aunt, was founded by retired Army SSgt. Richard "Dick" Stearns and his wife Flossie, Diana's sister. Their deaths in 2000 and 2002 respectively, eventually placed the workshop, retail sales store, rock yard and all of its' rocks into Diana's care.

Originally located along Highway 85/87, northwest of the exit onto Highway 16 and Ft. Carson, CDOT's roadway expansion mandated its' first move in 2007. Much of its' inventory was placed in separate off-site storage areas, with one site inaccessible and the other only available by request, to its' international clients, who had enjoyed "rock-hounding" through the hundreds of bins filled with slabs, boulders and specimens from around the world for over three decades.

Last year, the accessible site had to be given up. The present move, from downtown Fountain to 594 South Santa Fe Avenue (just northeast of the overpass to I-25 and Exit 128) is directly across from 7-11, has **lots** of parking and is expected to resolve some of the restrictive issues, as an effort to expand, with the return of the "**rock yard**" is planned. The unique gift items from around the world, jewelry, petrified woods, rock and mineral specimens, precious and semi precious gemstones and cabochons, dinosaur bones, geodes, rock tumbling and jewelry making equipment and tools, and all the natural stone beads and beading supplies needed for all the "**beaders**" in your life, continues to be available.

Dick's Rock Shop and Bead Store have also expanded its hours to {Monday through Friday 10:00a.m. until 6:00p.m. and Saturdays from 10:00a.m. until 4:00p.m.}. The phone number remains the same (**719-390-7788**) and the website listing is www.dicksrockshop.com.

We invite everyone to stop by and take a peak. Please watch for our **Grand Opening Celebration** coming in early June. Check the Fountain Valley News for upcoming details.

President's Message by Nathan Maiti~ //

So Many Choices "

One of the things I find fascinating about our hobby is the wide variety of interests that "fit" "within it. There are "big picture" differences in collecting interests such as:

- Well-crystallized mineral specimens
- Lapidary materials (including gemstones)
- Fluorescent minerals
- Fossils

Then there are subcategories within each group, and we each have our own favorites. With over 3,500 different mineral species to choose from, it is obvious that there are many options available in the mineral specimen category. Not all of these species are readily available or even attractive to look at, but for some people, species collectors, the goal is to obtain as many different species.

For other collectors, there are certain species that they have chosen to concentrate on. For some it may be quartz, for others it's calcite or fluorite, or phosphate minerals, or sulphide minerals like pyrite, galena and sphalerite, or ...fill in

We have many in this club, including your president, who has a special fondness for self-collected specimens. Others like to collect based on certain localities. Example locality collections might include New England minerals or New Hampshire minerals, or minerals from the Palermo No.1 mine.

Another way of organizing a collection is by the size of the specimens. This can range from big flashy cabinet-size specimens to thumbnail specimens in those 1-inch perky boxes all the way down to micros that require magnification to really appreciate. Like many collectors before me, I started out collecting bigger things, but as the basement and garage began to fill and my interests broadened, I became more interested in thumbnail and micro specimens. Recently I have been looking through the micros I collected at the Red Cloud mine on last month's BMC fieldtrip to Arizona, and I am continually amazed by complex forms and beauty that lurks in those tiny cavities.

I could describe a similar breakdown for the other three big categories that I listed at the start of this message, but I think you get the idea. My real message is that we each need to decide where we want to concentrate our efforts when it comes to our hobby. None of us has enough time or money to do everything. We will all end up specializing in something, even if only by accident. I encourage you to make it a conscious decision and then recognize that your decision is still subject to change as your interests change.

The best way to decide where your interests lie is to try different things and see which ones are the most enjoyable. I hope that the Boston Mineral Club can help provide you with many opportunities to try things out. Our field trip to Hardwick, Massachusetts, later this month is one example of such an opportunity (see page 3). Now Shaft 10 is primarily a micro locality and many people think they don't care about micros. On the other hand, it is an opportunity to try something new, add some self-collected babingtonite to your collection and experience a new locality. I can testify that the blue octahedral fluorites on epidote from Shaft 10 are stunning under the microscope or hand lens. I encourage you to give it a try You might be surprised. _

The End

-NATE MARTIN April 2012 BMC News 2

The previous article by the president of the Most Mineral Club, granted with his permission, may be of interest to our club member.

Ancient Sandstone Injected into Pikes Peak Granite is found Along Ute Pass

By Steven Wade Veatch

Along the Front Range of Colorado there are more than 200 sandstone dikes emplaced in ancient igneous (crystalline) rocks. Dikes are rock bodies that cut across another geologic body that formed first. These Front Range dikes are matchless since most sandstone dikes are found in other sedimentary rocks. The Front Range dikes have been perplexing since 1894, when they were first studied by the noted field geologist, Whitman Cross (1894).

These sandstone dikes are unique in the world, and they are only exposed in just a few sites along Ute Pass (Figure 1). The ancient dikes, composed of very old (Cambrian) Sawatch Sandstone (Figure 2.), formed long after the Pikes Peak Granite was present. When the Pikes Peak Granite was subjected to intense compression from faulting, extreme force was concentrated on the prehistoric

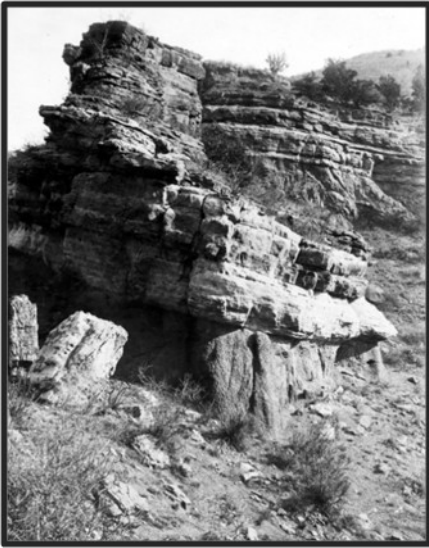


Figure 2. Historical photo (1914) of Sawatch Sandstone resting on even surface (eroded) of Pikes Peak granite: Ute Pass, near Manitou. El Paso County, Colorado. 1914. Plate 6 in U.S. Geological Survey. Folio 203. 1916 ID. Darton, N.H. 1508

sandstone, resulting in it being pressurized, heated, and fluidized. When fully fluidized, the sandstone was injected into enormous openings in Pikes Peak Granite; these openings were also formed by faulting pressures. Today, all of the Sawatch Sandstone dikes are eroded away except where they are preserved in certain areas of Teller County, Colorado.

Winding into the mountains, U.S. highway 24 closely follows the Ute Pass fault, a major fault that cuts through the mountain and separates the Rampart Range from the rest of the Front Range. Starting at Cheyenne Mountain, the Ute Pass fault can be traced for about 60 miles, and heads north beyond Woodland Park. The fault zone is relatively wide and filled with broken and fractured rocks that create the course of Fountain Creek in Ute Pass.

At least three of these resistant ridges are exposed along Ute Pass: one sandstone dike (or “injectite” as they are sometimes called) is exposed in Crystola; and two injectites (Figure 3) are exposed in Woodland Park (Temple, et al., 2007). The injectites are easy to spot—instead of Pikes Peak Granite being present; the sandstone injectites are there—with Pikes Peak Granite on either side.

Near Crystola there is a 100 meter-thick sandstone body, forming a resistant ridge of injectite sandstone. The dike—or injectite—dips at about a 75 degree angle to the west and strikes parallel to the Ute Pass fault.

These remarkable sandstone injectites can be thought of as “fault slices” of Cambrian Sawatch Sandstone “jammed” in Pikes Peak Granite during past movements of the Ute Pass fault. The injectites are made of fine- to medium-grained, well-rounded, and poorly sorted sandstone. Generally, the color of the injectites are reddish or maroon in color; but some of the weathered injectites have a buff discoloration on weathered surfaces that is related to the iron oxide cement present in the sandstone.

An examination of the dike rocks reveals an alignment of sand grains and granite fragments inside the injectites, which relates to the forceful injection of fluidized sand into openings into the granite caused by the pressures of faulting (Harms, 1965). Some angular fragments of Pikes Peak Granite found in the injectites are from being plucked off of the wall rock during movement.

Today the injectites remain a source of much scientific debate, and this summer a new scientist will probe the mysteries of this ancient sandstone imbedded in Pikes Peak Granite (J. Temple, personal communication).

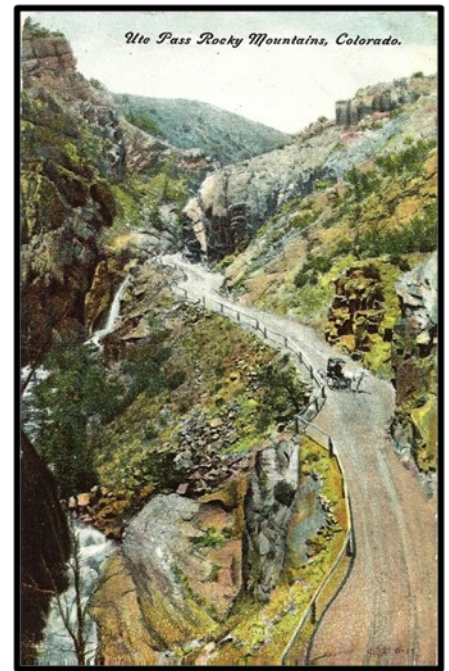
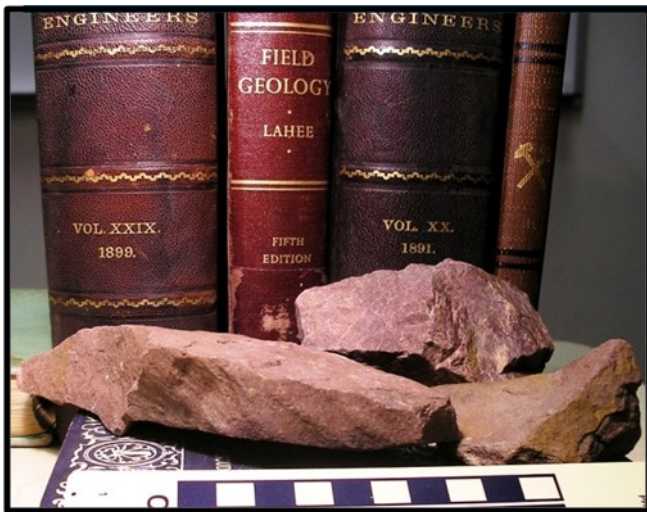


Figure 1. Ute Pass Circa 1890s. Postcard from the Veatch collection.



References:

Cross, W. (1894). *Intrusive sandstone dikes in granite*. (Vol. 5, pp. 225-230). Geological Society of America Bulletin.

Harns, J. (1965). *Sandstone dikes in relation to Laramide faults and stress distribution in the southern Front Range, Colorado*. (Vol. 76, pp. 981-1001). Geological Society of America Bulletin.

Temple, J., Madole, R., Kelle, J., & Martin, D. (2007). *Geologic map of the Mt. Deception quadrangle, Teller and El Paso counties, Colorado*. Denver: Colorado Geological Survey. Open File Report

OF-07-7, scale 1:24,000.

The End

Figure 3. Three injectite samples. The one in the foreground appears to have ripple marks formed by primordial wave action. Photo date December, 2011 © by Steven Veatch.

Life is not about waiting for the storms to pass...
it's about learning how to dance in the rain.

SECRETARY'S SPOT

by Jean Miller, CSMS

COLORADO SPRINGS MINERALOGICAL SOCIETY CSMS General Meeting 19 April 2012

Meeting commenced at 7 pm.

President Roger Pittman called the meeting to order. Two science fair winners gave a brief summary of their projects which were on display.

Molly Merkert, 9th grader from Palmer High School, described her first prize winning project on deadly metals such as cadmium, arsenic and lead that are present in competition medals, such as those handed out to student athletes at high school competitions. This project was Part II of the project she created last year. She will later present her findings to the California Office of Environmental Health hazards Assessment (OEHHHA)

David McHugh of Banning Lewis Ranch Academy was awarded 2nd prize and described his winning project about tsunamis and obstructions used to reduce the force.

Our special speaker was Mr. Martin Zinn, a collector and notable mineral show producer based in Evergreen, CO. His presentation was entitled: *Where have all the minerals gone?*

Mr. Zinn described how in the past mineral specimens were mined much more casually and were not sought by collectors nor valued for their beauty. Typically specimens even in museums were not of the finest quality, were not extensively cleaned and thus did not show their best qualities.

In recent years however professional miners and dealers have driven the industry to mine aggressively, withdraw specimens carefully to protect their structure, and clean them professionally so that they show very well. Thus there is a new crop of collectors who are willing and able to pay many thousands of dollars for one specimen. For example, at this year's Tucson minerals show one specimen sold for \$750,000. There are several other wealthy collectors who can and do collect extraordinary specimens that cost tens of thousands of dollars.

In between the billionaires who amass extraordinary collections, there are many excellent specimens that are undamaged, professionally cleaned and priced for those who do not drive a Maserati. Mr. Zinn's strategy for collecting minerals is to look for strong and unusual strong colors (avoiding black and white specimens) and spotting rare specimens with excellent color, form, condition and accompanied by other good specimens as part of the matrix. Mr. Zinn gave a slide show of extraordinary specimens that show rich color, interesting combination specimens. Some highlights are below:

High quality aquamarines from Pakistan are rather plentiful now and a good thing to collect.

The rarest aquamarine specimen was a 2 ½ x 1 ½ inch rarity from Connecticut collected about 40 years ago. No such specimens have been found since.

One slide showed a large specimen of brazilianite from Brazil that was so clear it looked like glass.

Chinese cinnabar is plentiful on the market now but they are costly. Chinese fluorite is a popular item to collect now.

Mr. Zinn showed an example of a most rare fluorite with calcite from Pea Ridge, Missouri.

Mr. Zinn's presentation was an entertaining show of extraordinary minerals.

Continued Pg 11

Mike Nelson csrockguy@yahoo.com; www.csmsgeologypost.blogspot.com

The last *truckin* contribution to the Pick & Pack (February, 2012) followed my trip on Blue Highways through the Black Hills of South Dakota. Blue Highways is a term coined by William Least Heat Moon for secondary roads, often printed in blue color, on Rand McNally maps. I have always been a Blue Highway sort of person, partially due to my geology interests and partially due to my general inquisitiveness of all things natural. It has been a good life.

Truckin, up to buffalo. Been thinking, you got to mellow slow.

Takes time, you pick a place to go, and just keep truckin on.

Grateful Dead

The area of western South Dakota is a great place to *just keep truckin on like the do-dah man*. Besides the numerous Blue Highways associated with the interior of the Hills (as explained in February), there are great collecting sites and interesting geology in areas surrounding these mountains. This contribution will attempt to spotlight a few of the highlights.

Directly east of the southern Black Hills, essentially south of I-90 and west of Murdo (Exit 192), is one of the most fascinating areas of the U. S. Collectively known as the “badlands”, this corner of the state has tremendous exposures of Tertiary rocks, especially those of Eocene, Oligocene, and Miocene age. In addition, travelers also will notice Cretaceous outcrops along the stream valleys—the dark gray (usually) Pierre Shale and the overlying buff-colored Fox Hills Formation (mostly sandstone). The centerpiece of the “badlands” region is Badlands National Park (1978), established in 1929 as a National Monument to protect the vast paleontological resources in the Eocene-Oligocene White River Group.

I had a great experience in the summer of 1966 rummaging around the badlands (lower case and generic badlands) while collecting geological information. “Things” were just different 45 years ago and I was able to travel and collect extensively over the region—but not in the National Monument!

Very few travelers heading east-west across South Dakota bother to explore this corner of the state other than taking a quick drive through the National Park loop. It is much too easy to set the cruise control at 75 mph and head down I-90. However, the “badlands” geology is fascinating and includes a number of large mesas locally known as tables and buttes. Two of the large highlands, Sheep Mountain Table (3143 feet) and Coney Table (3196 feet), have public access to their summits. Others, such as Rattlesnake Butte, are managed by the Oglala Sioux out of the Pine Ridge Indian Reservation. In the November 2010 edition of the Pick & Pack I wrote about the collection of calcite sand crystals collected on Rattlesnake Butte. All of these mesas have a similar geological profile with the badly eroded White River Group exposed on the flanks and a protective cover of Miocene rocks on top. In addition, many have summit blankets of Pliocene stream gravels.

Continued Pg 8

PRESIDENT'S CORNER

by Roger Pittman, CSMS

Now we **only have a month** before our show.

For any new members; we host a show at the Western Museum of Mining and Industry. WMMI allows us to rent spaces in their parking lot to gem, mineral, fossil, and jewelry dealers. Any profit we make goes into our show fund for next year. During the year any expenditures, specifically for educational purposes, also come out of the show fund.

We also hold a silent auction at this event and any funds derived from the silent auction go into our scholarship fund.

Please if you know a student about to or is attending college who is studying the earth sciences; have them apply for our **scholarship**. The form is posted on our website www.csms.us.

The mining museum charges the gate admission, which helps them with their operating expenses. This year WMMI is charging a discounted rate for our event!

We need help working our **silent auction** especially this year, as Frank & Ellie who have worked this booth tirelessly for years are not going to be able to work it this year.

We also need people to work our **hospitality booth** – just pass out information packs & talk about what we do.

Further, **security** – walk around and watch to see if anyone gets light fingers. We need people to **put in displays**, and then kind of **watch over them** and **answer questions** if needed.

Still more bodies are needed to **put up and take down signs**.

And, remember we need help with the **Kid's Arena!!**

Then I need people **to tell me what we need to do, should have done, what we have done that works, anything else I've forgotten; – preferably before the show begins.**

Thanks! Your “VERY NEEDY” President



Roger Pittman

The End



Fig. 1. A once thriving hotel in Fairburn, South Dakota.



Fig. 3. A plethora of quartz and microcrystalline quartz specimens awaits the collector.

The geology at the collecting site is as interesting as the specimens. French Creek has eroded the area and exposed the Cretaceous Pierre Shale, the Eocene/Oligocene Chadron Formation (White River Group) and Tertiary terrace gravels (the original source of the microcrystalline quartz nuggets) (Fig. 4). However, rockhounds also will notice a very distinct red-orange-yellow "bed" between the Pierre and the Chadron. Originally named the Interior beds (for exposures near the village of Interior), this "bed" is now known to be an ancient soil developed on the Pierre Shale in a tropical-like climate (warm and wet) during the Eocene.



Fig. 4. The Fairburn Agate Beds are widely exposed.

Fairburn Agates are among the best known agates from any locality in the world. The specimens are valued for their colorful fortification patterns with an abundance of reds (iron oxide), oranges (iron oxide) and blacks (manganese oxides). The derivation of their name comes from the small community of Fairburn, located south, ~25 miles, of Rapid City near SD 79 (Fig. 1). On the way to Fairburn rockhounds should stop and examine road cuts along Spring Creek to hunt for Prairie Agates. Collectors then should travel east from Fairburn along French Creek Road (good gravel) for about 12 miles to a sign locating the collecting area managed by the Buffalo Gap National Grasslands (Fig. 2). Although known to collectors for decades, these Fairburn beds still yield an occasional agate (such as mine in summer 2011) and as many colorful specimens of jasper, quartz and chalcedony as can be carried out by the collector (Fig. 3)



Fig. 2. Sign pointing to collecting areas in the "Fairburn Agate Beds." A primitive campground is also available.



Fig. 5. These red-orange beds represent an ancient soil.

Continued Pg 9

The Brule Formation (White River Group) overlies the Chadron and has produced beautiful specimens of a sky blue chalcedony; fewer veins are found in the Chadron. This microcrystalline quartz occurs in thin veins or dikes (non-igneous) due to diagenetic processes. Rockhounds should just make certain they are not in the National Park, private land or Reservation before collecting this somewhat scarce mineral.



Fig. 6. Chalcedony weathering from a vein in Badlands National Park. Photo courtesy of National park Service.



Fig. 7. *Helix leidy* (snails) from the White River Group.

genus *Helix* (Fig.7). This snail was one of the first fossils described from the “badlands” (Hayden, 1857). As the road (SD 44) descends down to the Cheyenne River, the Pierre Shale is exposed and a long time ago I was able to collect small limestone nodules with fossil crabs enclosed. In addition, I have a nice coral, probably Mississippian in age, collected from gravel pits along the river (Fig. 8).

A few miles past the river is the small community of Farmingdale with a paved road running north to New Underwood on I-90. To the south a gravel road leads to the Railroad Buttes collecting area on the National Grasslands. Again, collecting jasper, chalcedony and quartz is easy. But, I also have found Prairie Agates at this location. These agates seem to be “poor Fairburns” and are fairly common throughout western South Dakota and Nebraska. In fact, Prairie Agates are the “State Rock” of Nebraska.



Fig. 8. The provenance of this rounded cobble of a Mississippian coral was in the Black Hills. The collecting locality was in a Pleistocene gravel pit east of the Hills.

The small community of Wasta is located at Exit 98 on I-90. The interstate is not exactly a Blue Highway but was so in the mid-1960's when it was known as US 16. I drove the road many times from Chamberlain (my work station) to areas around the badlands and Black Hills (my research area). I commonly stopped at Wasta to explore outcrops of the Pierre Shale and to hunt the concretions for golden barite and coiled cephalopods. This area is quite famous for the fossils collected in the concretions (Figs. 9, 10, 11). Most are mollusks including the pelecypods *Inoceramus* sp. and *Pteria* sp., the cephalopod ammonites *Baculites* sp. and *Hoploscaphites nodus*, the gastropods *Margaritella flexistriata*, *Amauropsis* sp., *Drepanochilus* sp., *Anisomyon sexculcatus*, the scaphopod *Dentalium gracile*, as well as the coral *Micrabacia americana* (Sharman, 2008). The Wasta/Elk Creek area is famous for yielding treasures of golden barite. In fact, these barite localities were noted in the 2008 publication *American Mineral Treasurers* (published by the *Mineralogical Record*) as one of the top 50 American mineral specimen producing localities. Today, as I understand the situation, the private land is very difficult to access. If you plan on collecting I would suggest contacting the various rock and mineral clubs or rock stores located in the Black Hills.

Don't drink the water---I wish someone would have told me early on! In 1853 two geologists, Dr. F.V. Hayden and F.B. Meek, visited the Badlands region. Both were to receive national recognition later as distinguished scientists. They spent several days at Sage Creek, noted by travelers for the purgative qualities of its water. Both men and their horses experienced a weakening effect after drinking from the stream. Thanks to the National Park Service.

REFERENCES CITED

HAYDEN, F. V., 1857, Notes Explanatory of a Map and Section Illustrating the Geological Structure of the Country Bordering on the Missouri River, from the Mouth of the Platte River to Fort Benton, in lat. 47° 30' N., long. 110° 30' W. Proc. Acad. Nat. Sci. Philadelphia, v. 9, pp. 109-116, map.

Sharman, G. R., 2008, Petrology, Geochemistry and Paleontology of Fossiliferous Concretions from the Cretaceous Pierre Shale, South Dakota [abs.]: Geological Society of America Abstracts with Programs, v. 40, no. 5, p. 85.

Continued Pg 10



Fig. 9. Straight shelled cephalopods of the genus *Baculites*

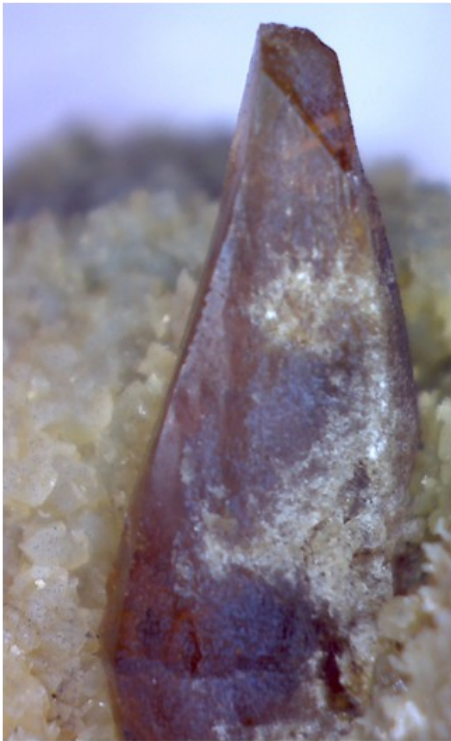


Fig. 12. Crystal of Golden Barite collected from Elk Creek, South Dakota. Length of crystal is 1.7 cm.



Fig. 10. Coiled cephalopod, *Hoploscaphites* sp, in a concretion collected from the Pierre Shale, South Dakota.



Fig. 11. *Baculites* in concretion of Fig. 10.

The End



More Hondo Pictures



2012 CSMS Officers

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Dave Olsen, Micromount Group

Brian Paterson, Webmaster

To contact an officer or chairperson, go to csms.us, click on Board Members, and, if their name is underlined, click on it.

General Meeting, cont.

Reports from Subgroups:

The crystal group will meet on the fourth Thursday in May at 7 pm at the Senior Center. There will be no meetings during the summer and will recommence in September.

The faceting group will continue to meet all summer on the fourth Thursday in May at 7 pm at the Senior Center.

The fossil group will meet on the first Tuesday of the month. The upcoming program will be on fossilization. The May meeting will be Planning for the Summer Field Trips. There will be no meeting during June, July, August, and September

Micromounters will meet on the second Tuesday in May and June at the Senior Center. Please contact Dave for more information.

Friday, 20 April 2012 some club members will meet at the Old Colorado Society Historical Museum to replace the current display case, created by the Pebble Pups, with a display featuring Micromounts. The museum wishes that our club could provide a new case four times a year.

Sharon of the lapidary group reports that the new saw is almost completely repaired pending purchasing proper parts and placing them precisely into the particular place. She hopes to have it running for a May meeting. You may call Sharon at 217.5683 for an appointment.

Bill Arnson – is available by appointment to work on projects.

Field trips: There are several upcoming field trips that are listed and describe at the club web site, www.csms.us.

We now have 13 dealers confirmed for our June show. It has been rumored that show folks often wait for until the last minute to commit. Bob requests that each person pass out ten flyers to your friends and relatives and especially the girl who sold you Girl Scout cookies!

Al Zelesnek has a Thursday night class so was not present tonight; therefore his Certification of Appreciation will be mailed to them. The club applauded the honor.

Ellie is selling magazine tonight so please peruse at your pleasure.

Sharon Holte will be on vacation until April 30th so wait to send your Pick & Pack documents until after that date.

Door prizes were distributed and the goodies were consumed with gusto.

The meeting was adjourned at 845 pm.

Respectfully submitted by Jean Miller

The End

Sub-Group Responsibilities for Refreshments for General Assembly Meetings

Feb.—Crystal	Mar.—Faceting	Apr.—Fossil
May—Jewelry	June—Lapidary	July—Micromounts
Aug.—Picnic	Sept.—Projects	Oct.—Board

And
another
picture



2012 Pikes Peak Gem & Mineral Show
Western Museum of Mining & Industry, June
22-24

9AM – 4PM Fri. & Sat., 9AM – 3PM Sun.



Sponsored by the Cripple Creek & Victor Gold Mining Co

225 North Gate Blvd., I-25 exit 156A
Colorado Springs, Colorado (Free Parking)

Fun for the entire family

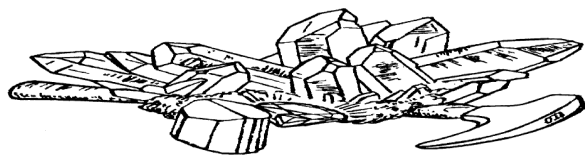
Gem, jewelry, mineral and fossil vendors, free
gold panning, rock identification, a special kids
area, silent auction, food vendors, exhibits,
lectures, US Geological Survey booth

Special turquoise exhibit from the
Denver Museum of Nature and Science

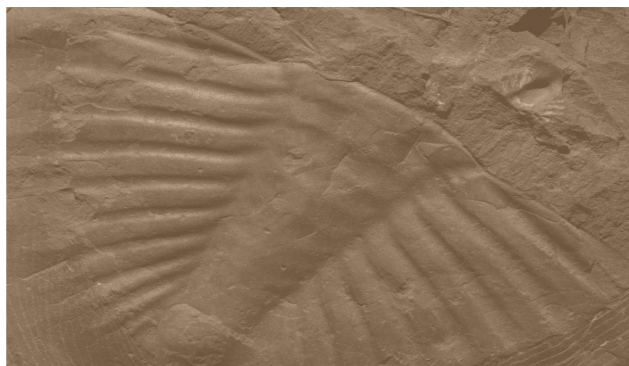
Sponsored by

Colorado Springs Mineralogical Society

Adults \$5, Children \$2, Museum members free



Visit these websites for more information:
www.csms.us and www.wmmi.org



Lectures and special exhibits for the
2012 Pikes Peak Gem & Mineral Show

The theme this year is “**how to**”, how to find specimens and “**how to**” be involved in and part of science.

Kevin Witte will give a program on how to recognize the pegmatite rock structure in search of smoky quartz and amazonite so prevalent in this area.

Jerry Suchan will give a program on area geology.

Steve Miller will talk about how you can participate in Science! Steve is a project leader with the Western Interior Paleontological Society. The past 6 years he has been leading field trips in the Comanche National Grasslands in conjunction with a Fossil mapping project with the US Forest Service. This project is staffed with volunteers from the Western Interior Paleontological Society who collect and document fossils and measure the thickness of different sediment strata in the grasslands. This is in an area where there have been many episodes of ocean regression and transgression resulting in fossil records of various extinct life forms in shallow waters. The end result will be a stratigraphic map of the studied areas and documented fossil finds that can be related to locations in surrounding states that have already been studied.

Dr. James W. (Whitey) Hagadorn the curator of geology at the Denver Museum of Nature and Science will be providing a special turquoise exhibit to be on display at the show. The exhibit will be from the raw materials to finished product with sterling silver.



February 2012

PICK & PACK

Our Staff...

Sharon Holte & Ellie Rosenberg—
Co-Editors
CSMS Members *Reporters*

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 is the **Saturday after the Board Meeting** - first Thursday of each month

To submit an item, please use the following:

For hardcopy photos or articles, mail to the address below or bring them to the General Assembly 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. Editors will correct font and type.

All articles not shown with an author are provided by the Editor.

E-Mail to: preferred
SharonRocksCo@gmail.com

Mail to:
Pick & Pack Editors



And, More
Pictures.

The End

Classifieds

CSMS

T-Shirts, Badges, and Pins

are available for sale. See Store
Keeper, Ann Proctor.

Hurry! Hurry!! Hurry!!

**Have You Picked Up Your
Membership Award Pin(s)?**

If you celebrated a CSMS anniversary in 2007, 2008, 2009, or 2010, your year pin award is available from

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FRIDAY, SATURDAY, & SUNDAY

Sangre de Cristo

Gallery & Rockshop

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(719) 783-9459

gallery@ris.net



719-531-7203

Joe & Marylee Swanson Colorado Springs, CO
Krystals@webtv.net

The Colorado Springs Mineralogical Society

Pike's Peak Gem & Mineral Show

June 22th, 23th and 24th, 2012

Western Museum of Mining & Industry, Colorado Springs, CO.

Request for NON-COMPETITIVE Display Space

Name:

Society:

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Address:

--

Phone:

Email:

--	--

City:

State:

Zip:

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Exhibitors are urged to bring their own cases. A limited number of club cases are available upon request. Exhibitors using club cases will need to furnish any risers, linings, padlock or accessories as needed. EACH CASE WILL BE **Describe Display or Displays:**

--

	I will bring my own display	Your case length	#of cases
	I will need a case*	Case size desired	#of cases

* CSMS cases are approximately 36" by 24" outside measurements. A few 4-foot cases are generally available. There is a hasp on the case that accepts an exhibitor-supplied padlock. Setup is from 7:30 AM to 9 AM on Friday. Tear down 3 PM to 5 PM on Sunday.

Signature of Non-Competitive Exhibitor: _____

With the signing of this request, email submission of this document or showing up with an exhibit, it is mutually agreed that the Colorado Springs Mineralogical Society and the Western Museum of Mining & Industry shall not be liable to any exhibitor for damage, loss or destruction of any exhibit or injury to his person for any cause and all claims for injury are expressly waived by the exhibitor.

Please return by mail or email by:

RETURN TO: Bob Landgraf

June 15th to reserve a case and exhibit space.

304 Palmer Trail

After June 15th exhibitors are still welcome

Manitou Springs, CO 80829

based upon availability of cases and space.

719-685-1364

rmlwp74@aol.com

The Colorado Springs Mineralogical Society Case.

All measurements are inside measurements. However, since all cases are handmade there may be some slight variations in the cases. Be sure to bring any necessary tools required to make adjustments to your liners.

Bottom is 35 in wide by 23 in deep

Back is 35 in wide by 21 1/2 in deep

Side bottom is 23 in deep by 21 1/2 in high by 19 in deep at the top

Unfortunately, the pictures Bob Landgraf included will not copy and paste

If you have any questions, please feel free to call Bob Landgraf at **719-685-1364** □

More Pictures: Hondo Canyon

The End





PICK&PACK
P.O. Box 2
COLORADO SPRINGS, CO 80901-0002

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Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are held the **third (3rd) Thursday of each month**, except January & August, (picnic) **beginning at 7:00 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: Crystal Study Group, Faceting Group, Fossil Group, Jewelry Group by RVSP, Lapidary Group by RVSP, 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 Assembly meeting or visit our web site: www.csms.us.