PICK&PACK

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Volume 44 Number 9

Topaz Occurrences of the Redskin Granite, Pikes Peak Backcountry

Andy Weinzapfel, geologist

Topaz is a hard precious gemstone, a hydrous aluminum fluorosilicate crystallizing in the orthorhombic system. Stubby, prismatic crystals often display terminations with many complex, well-developed faces, as well as striations on lengthwise surfaces. Clear quartz crystals can be mistaken for colorless topaz. However, topaz has perfect basal cleavage; quartz does not.

Worldwide, topaz is found in a large variety of geologic settings. The most productive deposits are in Brazil, Russia, and Sri Lanka. Within the Pikes Peak batholith, the best finds have come from seven areas: Devils Head, Glen Cove, Wigwam Creek, Crystal Park, Harris Park, Crystal Peak, and the Tarryall Mountains.

The Redskin granite of the Tarryall Mountains is the most consistent topaz producer in Colorado, and the source of some of the finest topaz crystals in the United States. An oval shaped intrusion of about 19 square miles, the Redskin is a fluorine/tin/beryllium/topaz-rich granite

*See **Micromount** on page 5*

Great Things Come is Small Packages

What is a Micromount?

Tim Jokela, Jr.

I'm fond of Neal Yedlin's definition:

A micromount is a natural mineral specimen, preferably in distinct crystals, mounted, properly labeled, and requiring magnification for meaningful observation.

Of course, a newcomer to the hobby won't really understand the statement, or realize that it can be interpreted in different ways, so here's a brief FAQ. Bear in mind that this is only a brief introduction; there are exceptions to every rule. For more detailed information, consult the web or the literature. Let us begin at the beginning.

What the hell? You collect what?

Nobody blinks an eye at a man who spends thousands of dollars a year just to hit a small white ball into a hole in the ground, or a grown woman who has a room lined with ugly plastic dolls; but if you say you're a mineral collector, it simply does not compute. People look at you funny and assume you're touched in the head. Minerals surround us; we use them every day. Our cars, toothpaste, and computers are made of them, but most people have absolutely no concept of what they actually are, and no idea that lots of people (not just geologists) spend their entire lives collecting and studying them.

Silver wire
Sarbay Mine, Kazakhstan
~15mm across
Photograph by Arnim Walter

Collecting minerals actually makes a great deal of sense. Mineral specimens are beautiful, immensely collectible examples of natural artwork. The finest and rarest specimens can command six or seven digit prices, though the vast majority are well under $200. Every mineral specimen is unique, many are brilliantly colored and come in large, well-

*See **Micromount** on page 4*

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.

PICK & PACK

Our Staff...

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

Robert & Naoko Murphy *Mailers*

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

Address:
1025 East Boulder Street
Colorado Springs, CO 80903

Phone & Fax:
(719) 448-9949
For faxes no precalls are required.

The PICK & PACK is published ten (10) times per year. 270 issues printed, 200-250 mailed per month.

PRESIDENT'S CORNER

Show Chairman Found

2005 Show Starting to Come Together

Robert Landgraf

I want to thank Lorrie Hutchinson for volunteering to be Show Chairman for the 2005 Show. I hope that you will all give her the support we need to make the 2005 Show a great success. We have most of the chair positions under her filled, so we have a good start. We are still looking for the show security position to be filled. That is an easy but important job. The last holder of that position will give you the contact information to arrange for guards for our show. Then, the main thing is to see that they arrive when the show opens and know whom to call if no one appears. Please let Lorrie know if you are interested.

Smithsonian mineralogist Michael Wise is planning to once again be able to join us for our show. We are trying to arrange for a special exhibit from the Smithsonian in conjunction with his visit. There is a large yellow topaz that a group of Northwest Mineral clubs contributed monies for faceting. That gem is now available for traveling exhibit.

We also have invited clubs from Southern Colorado to join us for the federation show. So far the Lake George and Pueblo clubs have responded in the affirmative. Brent Williams has volunteered to organize field trips for 2005 and also the 2005 Show trips. The show field trips will run for five days following the show. We need people to volunteer to lead the individual show trips and are looking for places that we can take people. Please get into contact with Brent with your ideas. We would like a variety of ideas to cover crystals, micro-minerals, fossils and agate or fossil wood.

November Program

Ancient Rocks and Fossils of the of the Front Range

Jerry Suchan

We will see a slide show describing the geology (rocks) and paleontology (fossils) for the Colorado Springs and nearby areas along the Front Range. Pictures of locations and specimens illustrate in practical and interesting ways how the sciences of geology and paleontology look at rocks, crystals and fossils. We will consider only the "ancient" rocks (Pleozoic Era and older) during this program.

November 2004 General Assembly
Thursday, November 18, 2004, 7:30

Colorado Springs Senior Center
1514 North Hancock Blvd

October's refreshments courtesy:
Camera Group

CSMS Show to Recieve National Recognition

The CSMS hosted Bob and Cora Keppel as our honored guests for the 2004 Pikes Peak Gem and Mineral Show.

For those of you who don't remember, Bob Keppel is a contribuitng editor to *Rock and Gem Magazine*.

Bob Keppel was kind enough to let us know that his article about his visit will be appearing in the January 2005 edition.

Get your subscription now so you don't miss it.

CSMS Updating Membership Files

All Members Asked to Participate

We find another year coming to an end. With every new year comes the cry, "Dues are now due," and this year will not be any different. What is different about this year is the CSMS board of directors has set the directive to update and clean-up the membership database.

Through the years the CSMS membership database has grown in size and structure. For 2005 we are hoping to start with a new database and reenter all data correctly. Of course, all of the existing membership data will not be lost and all pertinent information will be transfered to the new database. This includes the year the member joined and the number of years they have been paid members. Also, all of the historical data will also be transfered.

To help with this endeavor, we are asking all members to completely fill out a membership application when they submit their 2005 dues. To help assist with this, we have included a membership application in the back of this issue and will include it for the next few issues. We will also be making it available for download in PDF format on the CSMS website (www.CSMS.us).

We want to thank everyone in advance for their cooperation in this matter and promise you that all information is held in confidence, accessible only by the board.

Minutes...

October 21, 2004

Bob Landgraf called the meeting to order at 7:35 p.m.

Minutes from previous general meeting were accepted.

Treasurer's Report: Same status as reported the last month.

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

Show Report:
The CSMS needs to fill the show committee chairman position - Lorrie Hutchinson was nominated.

Field Trips:
Trip to the Mex-Tex, Royal Flush and Desert Rose mines in Bingham, NM is planned for Nov. 12 in conjunction with New Mexico Mineral Symposium in Socorro.

Old Business:
None.

New Business:
- Nominations of CSMS officers for 2005 are as follows:

President	Drew Malin
Vice-president	Rick Olson
Secretary	Rick Copeland
Treasurer	James Bushnell
Editor	Ethan Bronner
Member at large	John White
Member at large	Louis Severini
Field trip chairman	Brent Williams

- Loren Lowe informed about closing the Sweet Home Mine.

The general meeting was adjourned at 8:20 p.m.

Final Draft of Proposed Operating Procedure for Awarding the CSMS Scholarship

On an annual basis, the Colorado Springs Mineralogical Society (CSMS) will form a committee that will:

- Distribute information/applications to area high schools concerning the CSMS undergraduate scholarship program.

- Review scholarship applications to determine the appropriate recipient.

- The amount of the scholarship will be a minimum of $1000 per year. The source of these funds will be from the annual show profits, fundraising activities and club investments.

- Determine the scholarship recipient based on academic achievement and financial need.

- Accept applications from any resident of El Paso/Teller County, CSMS member's family or any affiliate of CSMS who will be an undergraduate student at the Colorado School of Mines, the University of Colorado, Colorado Springs (UCCS), The Colorado College, New Mexico Tech, South Dakota School of Mines or Montana Tech. Scholarship recipient(s) must reapply each academic year as the scholarship is awarded on an annual basis and not the duration of the student's tenure at one of these colleges. Scholarship applicants must major in Mineralogy, Geology or some other field of the Earth Sciences.

- Award the scholarship to the American Federation of Mineral Societies if no local student can be selected.

- Give CSMS family members full consideration for the scholarship in the final review of all applications.

The above is the final draft of the CSMS Scholarship operating procedures. The membership will be asked to cast their vote for aproval at the November General Assembly.

Itacolumite

A Flexible Sandstone

The name given to a variety of porous yellow sandstone or quartzose schist, which occurs at Itacolumi, in the southern portion of Minas Geraes, Brazil. This rock is of interest for two reasons: it is believed to be the source of the diamonds which are found in great numbers in the district, and it is the best and most widely-known example of a flexible sandstone. Itacolumite is yellow or pale-brown, and splits readily into thin flat slabs. It is a member of a metamorphic series, being accompanied by clay-slate, mica schist, hornblende schist and various types of ferriferous schists. In many places itacolumite is really a coarse grit or fine conglomerate. Other quartzites occur in the district, and there is some doubt whether the diamantiferous sandstones are always itacolumites and also as to the exact manner in which the presence of diamond in these rocks is to be accounted for. Some authorities hold that the diamond has been formed in certain quartz veins which traverse the itacolumite. It is clear, however, that the diamonds are found only in those streams which contain the detritus of this rock.

On the split faces of the slabs, scales of greenish mica are visible, but in other respects the rock seems to be remarkably pure. If a piece which is a foot or two long and half an inch thick be supported at its ends it will gradually bend by its own weight. If it then be turned over it will straighten and bend in the opposite direction. Flakes a millimetre or two thick can be bent between the fingers and are said to give out a creaking sound. It should be noted that specimens showing this property form only a small part of the whole mass of the rock. Flexible rocks have also been reported and described from North and South Carolina, Georgia, Delhi, and from the north of England (Durham). They are mostly sandstones or quartzites, but the Durham rock is a variety of the magnesian limestone of that district.

Some discussion has taken place regarding the cause of the flexibility. At one time it was ascribed to the presence of thin scales of mica which were believed to permit a certain amount of motion between adjacent grains of quartz. More probably, however, it is due to the porous character of the rock together with the interlocking junctions between the sand grains. The porosity allows interstitial movement, while the hinge-like joints by which the particles are connected hold them together in spite of the displacement. These features are dependent to some extent on weathering, as the rocks contain perishable constituents which are removed and leave open cavities in their place, while at the same time additional silica may have been deposited on the quartz grains fitting their irregular surfaces more perfectly together. Most of the known flexible rocks are also fine-grained; in some cases they are said to lose their flexibility after being dried for some time, probably because of the hardening of some interstitial substance, but many specimens kept in a dry atmosphere for years retain this property in a high degree. (J. S. F.)

Source:"ITACOLUMITE." LoveToKnow 1911 Online Encyclopedia. *©2003, 2004 LoveToKnow.http://56.1911encyclopedia.org/I/IT/ITACOLUMITE.htm*

Micromounts

continued from page 1

formed transparent crystals, but they're not just pretty, they often have tremendous economic and scientific value.

The mineral collecting hobby is perfect for anybody living in an area of inhospitable winters. You can collect lots of neat stuff all summer, then sort it all out during the winter—a perfect balance of mental and physical activity not available to collectors of manmade items like stamps, coins, or ornate Albanian nutcrackers. Mineral collecting at its best is not just about mindless accumulation; the pleasures of identifying your finds, studying geology, and pursuing mineralogy to its fullest extent make this hobby far richer and more interesting than most. You don't need to be an athlete to collect minerals; you don't need to be a science nerd, or be rich, or have a Ph.D. in chemistry, and you don't have to buy a license to collect minerals. All you really need is some curiosity about the natural world around you.

It's easy to get started in mineral collecting, as most cities will have one or more mineral clubs full of people that would be glad to show you the ropes. The hobby can be scaled to fit any budget, and can be done in whatever spare time and space you have available. You can simply collect minerals that you like, or you can specialize in any of dozens of areas of the hobby. From collecting minerals in the field to specializing in the minerals of one country, or making your own jewelry, or even collecting only the most perfect microscopic crystals—the possibilities are limitless. Check out a local club, or find a mineral show in your area, and I guarantee that you'll be hooked on the best hobby there is. You'll never be bored again, and will benefit greatly from the fresh air, companionship, and mental and physical exercise.

What is a mineral?

We're talking rocks and minerals here, not vitamins and minerals. And in fact we're not even talking rocks. Most mineral collectors (AKA "rockhounds") collect minerals; only geologists collect rocks. Rocks are actually rather ugly and boring, unless you're a geologist or prospector. It's easy to differentiate rocks and minerals: all rocks are made up of minerals. There are about 4,000 different minerals now known. Ernest Nickel's definition of a mineral is probably the best:

A mineral is an element or chemical compound that is normally crystalline and that has been formed as a result of geological processes.

Note that "geological processes" are required to form a mineral, stuff produced by crystal growing kits doesn't count as a mineral. This is a highly controversial pair of words, as some very interesting minerals have been formed by non-geological processes, but that's a whole 'nother story.

What is a crystal?

To paraphrase Sinkankas, a crystal is a mineral with a uniformly orderly internal atomic arrangement. The lovely shiny crystal faces we all ooh and aah over simply reflect the atomic structure of the mineral. Crystals can be submicroscopic, or weigh tons. Not all minerals are found in good crystals; in fact only a few hundred minerals are generally available in sizeable, attractive crystals. Many more, however, are found in lovely microscopic crystals...enter the micromounter!

What do you mean by "mounted"?

The ideal micromount is glued to a pedestal within a small (~20mm square) plastic box, oriented so that the best crystals face upwards for easy appreciation.

How and why do you label tiny little specimens?

A specimen without a label is worthless—you must record the name and locality of your specimens. If you can't identify the mineral, but know the locality, then put that on the label.

How much magnification do you need?

Micromounters by and large use low power stereo microscopes. You don't really need anything over 80x, the average range is 10x-40x or so. Biology scopes that range from 100x to 600x or more are by and large useless. Low power loupes (small folding magnifying glasses) are handy, but 10x doesn't really let you see much. Well-heeled micromounters have Scanning Electron Microscopes, which provide excellent images of very, very tiny crystals. For more information on microscopes, see *Tools of the Trade*.

Topaz

continued from page 1

considered a "juicy" late stage potassic variant of the 1.08 billion-year-old Pikes Peak granite (PPG). The Redskin granite was likely emplaced around the end of crystallization of its parent PPG at shallow depths. Ludington (1981) views the Redskin as a cupola, or isolated upward-projecting plutonic body, sitting atop the main mass of the much larger Pikes Peak batholith. In contrast, Hawley uses the term "cupola" at a much smaller scale, referring to two mineralized satellite bodies on the western edge of the Redskin granite, locally termed the Boomer and China Wall. In contrast to the generally coarse-grained PPG, the Redskin granite is crudely zoned, having a fine- to medium-grained core and a coarse-grained outer zone. The Redskin granite weathers a more intense reddish color than the PPG. This is probably due to an excess of iron-rich biotite mica.

The best known and most heavily explored collecting area is east and southeast of Spruce Grove Campground, along Park County Road 77, about 13 miles north of Lake George. There, topaz crystals are found in granite pegmatites and miarolitic cavities or pockets, associated with smoky and colorless quartz, hematite, pink microcline, phenakite, and other minerals. Aplite (fine-grained) granite dikes within the Redskin intrusion are also topaz bearing. In old diggings, attention should be given to red clays. Some outstanding topaz crystals have been overlooked in previously prospected pockets, obscured by these hematitic clays. Topaz also occurs in pipe-like circular bodies of heavily altered quartz-muscovite rock called greisens, associated with beryllium minerals. These are typical of the Boomer and China Wall cupolas.

About three miles southeast of the Spruce Grove, along Matucat road, topaz crystals occur in gravel placers as colluvial/alluvial deposits. A fee mining area operates there. These deposits are near their pegmatite source within the Redskin granite, as crystals faces are not abraided much by transport. Due to its high specific gravity of 3.5, topaz is selectively concentrated near the bedrock surface.

Tarryall topaz is colorless, white, blue, yellow, brown, or sherry. An interesting bi-color effect is present in some crystals. As they are rotated and viewing angle changes, distinct changes of blue and sherry colors are noted.

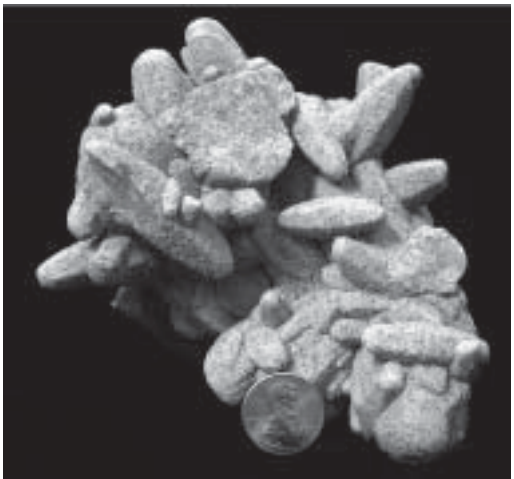
The Lost Creek Wilderness covers the northern 40 per cent of the Redskin intrusion. While this area has only been superficially mapped, the geology appears consistent with the known productive portion of the Redskin stock. Thus, it would be extremely surprising if topaz deposits were NOT present in the Lost Creek Wilderness! While this is unfortunate for the mineral collector, please respect federal laws and refrain from collecting there.

Sand Calcite Crystals

Steven W. Veatch, geologist
and
Ed Raines, geologist

Large quantities of sand calcite crystals have been found at the Snake Butte locality in South Dakota. Snake Butte is situated on the Pine Ridge Indian Reservation approximately 23 miles (35 km) south of the town of Interior, South Dakota, about 80 miles (130 km) east of Rapid City. Generally, the collecting method is to simply dig the sand crystals out of loose sand.

These interesting specimens are thought to have been formed by the action of ground water or by spring deposition and are composed of calcite ($CaCO_3$) and coarse wind-blown sand from an ancient dune deposit field. The absence of mud and silt and the well-rounded sand grains, along with wind-etched surfaces, indicates dune origin. The crystals are composed of about 37% calcite



Sand calcite crystals from South Dakota. Jo Beckwith specimen, S.W. Veatch photo.

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Geologic Ages and Formations

Greg McGill

Maybe you have wondered where geologists get the names of formations and geological ages. It's not very puzzling at all: it was done to honor some now-forgotten pioneers in the early days of geology. Here is a brief rundown.

Cambrian: Comes from the name of an ancient Welsh tribe and was named by Adam Sedgwick & Patrick Murchison in 1835.

Silurian: Comes from another Welsh tribe and was named by Sedgwick and Murchison in 1835.

Ordovician: Comes from yet another Welsh tribe but was named by Charles Lapworth in 1879 to cover the interval between Cambrian and Silurian.

Devonian: Comes from Devonshire where the distinctive fauna were first studied. This was jointly named by Murchison and Sedgwick in 1840.

Carboniferous: Means "coal-bearing" and was named for the strata in north-central England that contained coal. The name was given in 1822 by William Coneybeare and William Phillips.

Mississippian and Pennsylvanian: Refer to the lower and upper Carboniferous respectively. These names are not used outside America and have only been recognized by the USGS since 1954.

Permian: Is named after the provice of Perm in Russia. Murchison suggested the name in 1841.

Triassic: Refers to the tree-fold division seen in rocks of similar age. Fredrich von Alberti, an official in the German Salt industry, suggested the name in 1834.

Jurassic: Was named after the Jura mountains in northern Switzerland by Alexander von Humbolt in 1795. Lepold von Buch, in 1839, redefined the strata and kept the name.

Cretaceous: Comes from the Latin for "chalk" and refers to the strata encircling the Paris Basin. Not all strata of this age contain chalk but Omalius d'Haloy did not know this in 1822.

Tertiary: Is a bit confusing. In 1760 Giovanni Arduino classified rocks into three main categories. His Tertiary category included "weakly consolidated stratified rocks usually containing numerous shells of marine origin" and volcanic rocks. The current constituent series—Paleocene, Eocene, Oligocene, Miocene and Pliocened—have their type sections in France, so the Italian-given name is kept to honor Giovanni.

The Glacial Drifter: March 2000

and the rest is mainly sand inclusions. The sand is composed of quartz, orthoclase, microcline, albite, muscovite, biotite, hornblende, augite, tourmaline, zircon, garnet, staurolite, and magnetite (Wanless, 1922). Additionally, volcanic ash, fragments of volcanic glass, and schist can be found found. Some of the minerals present in the sand are from Precambrian pegmatites (tourmaline) and schists (garnet, staurolite, and schist fragments) of the Black Hills (Wanless, 1922).

The process forming these sand calcite crystals is likely a fluctuating water source that floods the unconsolidated sand on an annual basis. That water comes from a source that provides calcium carbonate in solution. This mechanism could be as simple as groundwater, natural springs, or a combination of snowmelt and/or spring rains flowing on and through a limestone that then flows into the unconsolidated sand exposure. This process fills the pore space within the sand completely with water that is close to being saturated with calcium carbonate, having dissolved it at a relatively low temperature (taking advantage of the carbonates inverse solubility with respect to heat).

Then, as summer comes, solar energy heats the pore water while also causing some evaporation. Concentration of calcium carbonate follows and the pore water becomes super saturated. The surface tension of water would hold pores full of solution in some areas instead of allowing a partial emptying of pores. Also, the permeability factor is an important part of the mechanism of sand calcite crystal formation. High permeability would allow the pore water to easily flow through an unconsolidated and very loosely compacted sand. Once the well-sorted sand is saturated with water, subsequent evaporation will—at one point—set off precipitation.

Since there are many nucleation sites available around the sand grains, crystallization may proceed rapidly, and as it proceeds it will do so with many growths in parallel orientations. With calcite there are several chances of forming orientations that will lead to a single crystal. When chance creates a different orientation an intergrowth results, and through time—as the crystals grow outward—those orientations really begin to come into play so that intergrowths of interlocked crystals occur. The process stops for each crystal group when the water pockets run out. Then the process can begin again next year. This is likely a rapid process—hours rather than days, or at maximum a few days.

View of Snake Butte, a National Natural Landmark designated in 1967. National Park Service Photo.

Today, the Snake Butte calcite sand crystal locality in South Dakota is a National Natural Landmark and is managed by the Oglala Sioux Parks and Recreation Authority.

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What-cha Worth?

The average man is composed of enough iron to make a mediumsize nail; enough sugar to fill a shaker; enough lime to whitewash a chicken coop; enough phosphorus to explode a toy cannon; enough sulfur to rid a dog of fleas; enough fat for seven bars of soap; and enough brass to build his statue. Incidently, the minerals in the human body used to be worth 98 cents, but now they are worth $5.50 and escalating all the time.

Source: Gulfport Gems June 2002


Robert Ohlin at Holcim
Cripple Creek & Victor Mining Company
526
Ray BerryCrystal Group Trip to CSMS2
Rick Olson helping Roger get unstuck at Dick Holt's Claim
Roger Pittman Eureka Tunnel
CSMS Members at orientation at the Holcim cement quary
Moyra Lyne Eureka Tunnel
Montaine Bronner at Dick Holt's claim
Lorrie Hutchinson Holcim
Dick Holt and Rick Olson

Littleton Gem and Mineral Club Silent Auction

Dear CSMS Members:

The Littleton Gem and Mineral Club invites your membership to our annual Silent Auction. The auction will be held Saturday afternoon, November 20th at our regular meeting location - the Littleton Community Center, 1950 West Littleton Blvd. From the parking lot to the south of the building, follow the signs to the auction site.

You are welcome to buy or sell minerals, gems, jewelry, fossils, books, equipment and anything else related to our hobby. If selling, please remember that 20% of the proceeds from sold items is retained by the Littleton Club to help with expenses. Selling quests are requested to limit their stock to about twelve items due to space considerations. Bid slips are available during set-up, and one must be filled out for every item. Set-up will begin at 1:00 PM, and the auction will run from 1:30 PM to about 5:00 PM. We also have a verbal auction featuring items from several local dealers.

As always, great food, snacks, and drinks will be available throughout the auction. All guests are welcome, but not obligated, to contribute items to the food table.

On behalf of our membership, I hope that some of your club members will be able to attend. Auctions are great fun: treasures can be found, and Christmas presents for your hobbyist friends may be waiting for you.

Sincerely,

Larry Havens
President
LittletonGem and Mineral Club

GOLD RUSH DAYS!

Super Saturday, November 13, 2004

Saddle up your burro and come on down to the Western Museum of Mining and Industry! Use your imagination and venture to a time of limited technology, but tons of creativity! Learn what pioneer children did for fun through games and toys. Create your own toy or one made by pioneer children. Play games or relearn an old favorite. Participate in an historic and ongoing activity through our championship gold panning races where you will learn the art of gold panning!

Admission: Due to generous support from our Museum Members, Super Saturday admissions are only $3 per person. (Museum members and CSMS card-carrying members are always admitted at no charge!) Reservations are requested; please call (719) 488-0880, or correspond by e-mail to specialprograms@wmmi.org.

Time: 1:00pm

Location: Western Museum of Mining and Industry (WMMI) Located just north of Colorado Springs. Take I-25 to the Gleneagle Exit (156A); the Museum entrance is immediately east of the interstate, just opposite the north entrance to the U. S. Air Force Academy. Remember to visit our web site at: www.wmmi.org.

Colorado Springs Mineralogical Society
Post Office Box 2
Colorado Springs, CO 80901

Application for Membership and Renewal

Primary or Family Last Name **First Name** **Middle**

Spouse Last Name **Spouse First Name** **Spouse Middle**

Address **City** **State** **Zip**

Telephone **E-Mail**

Name and age of dependents under 18 yrs (Family Membership Applicants only)

1. All memberships run from January 1 to December 31.
2. Any person joining after June 30th shall pay half of the yearly rate.
3. Any member joining after October 1st receives membership for November and December plus the following year beginning January 1. The partial year membership shall not apply towards the 25 year Lifetime Membership.
5. Yearly dues must be paid each year before March 31. Members with unpaid dues will be dropped from the roster. Members who missed this deadline must pay the full rate to renew.
6. Members who have paid their dues for 25 years will be awarded a Lifetime Membership. Lifetime Members receive all of the CSMS benefits and no longer have to pay the annual dues.
7. Members in good standing receive the following benefits: 10 issues of the CSMS newsletter, *The Pick and Pack*, right to participate in all field trips (additional fees may be required on some field trips and members are responsible for all transportation to and from), participation in one or 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.

Have you previously been a member of the CSMS? Yes / No When? _____

Your dues MUST accompany this application.

☐ Junior Membership (12 to 17 years old)	$2.00/year
☐ Regular Membership (18 and Over)	$15.00/year
☐ Family Membership (Parents and dependents under 18)	$25.00/year

I hereby agree to abide by the Constitution and By-laws of the Colorado Springs Mineralogical Society.
CSMS By-laws are available at our website (www.CSMS.us)

Signature of Primary Applicant **Application Date**

Please fill out the Applicant Information form on the back.

Applicant Information

	What are your interests?	Would you like the Satellite Group to contact you?	Are you able and willing to teach this subject?
Crystals	Yes / No	Yes / No	Yes / No
Fossils	Yes / No	Yes / No	Yes / No
Lapidary	Yes / No	Yes / No	Yes / No
Jewelry	Yes / No	Yes / No	Yes / No
Micromounts	Yes / No	Yes / No	Yes / No
Faceting	Yes / No	Yes / No	Yes / No
Photography	Yes / No	Yes / No	Yes / No

Other _____

Clubs are made up of volunteers doing their share for the good of the whole group. Please indicate which of the following you might be willing to help with.

- ☐ **Artist**
- ☐ **Writing**
- ☐ **Editor**
- ☐ **Mailing**
- ☐ **Local Shows**
- ☐ **Youth Activities**
- ☐ **Programs**
- ☐ **Field Trips**
- ☐ **Refreshments**

Others _____

Each May the Colorado Springs Mineralogical Society publishes a Membership Directory.
The directory is distributed to members ONLY.

☐ Check if you would **NOT** like your name and address included.

Sometimes knowing where our members are employed or retired from helps us when we are looking for special information or guidance in our activities. This information will not be published or accessible except by the CSMS Board of Directors. _____

Do Not write below this line

Approved By: _____ Entered in database _____
Signature of club officer Date

Annual Banquet

Installation of Officers for 2005

Thursday, January 20, 2005

Embassy Suites Hotel
7290 Corporate Center Drive
Just off Woodman near I-25.

This year we will start the banquet at 6:00 PM with a reception and cash bar. Dinner will follow at 7:00. *The business/presentation portion will begin at about 8:00.*

Like last year, we will be served a Beef/Chicken combination plate so no dinner choice will be neccessary. A vegetarian meal is available.

Pre-registration for the dinner portion is required. Please send your check and completed registration form by January 4th.

The dinner portion of the meeting is strictly optional. The club invites all members to attend. We will have extra tables available for people who want to attend the program/ meeting without attending the dinner. The cash bar will be open through dinner and a short time prior to the meeting and presentation. All members are invited.

Presentation: **The Map that Changed the World -** By Steve Willman

In 1815 William Smith published the world's first geological map. The map defined the underground structure of all of Great Britain. Smith had worked completely alone and largely in secret on this map for 15 years. He was the first to define the theory of succession of layers and the first to recognize and use index fossils.

Smith was a canal builder working near Bath, England in the late 1700s. His work there led him to uncover the precepts of modern geology. Smith's ideas were a brave departure from the then pervasive beliefs that the earth was only a few thousand years old and that fossils were remnants of the great flood.

Smith's story is told in the book "The Map that Changed the World" by Simon Winchester. The book captured my imagination. It led me to England to search for his canal and visit the countryside where his ideas were born. My program will follow Smith's story and describe my own search through the English countryside.

Registration form on the backside of this page

2005 Colorado Springs Mineralogical Society
Banquet Registration

Name(s): _____

_____

_____

_____

Phone Number: _____

Number of Vegetarian Dinners _____

Number of Beef/Chicken Dinners _____

Total # of Dinners _____

x $15.00

Total Enclosed _____

Send checks made payable to CSMS only.
Tear out this page and mail it with your payment to:
Cindy Bronner
1025 East Boulder Street
Colorado Springs, CO 80903

Board Meeting: 1st Wednesday @ 7:00
Bob Landgraf: 687-3195

The Board Meeting will be held at Drew's office on November 3.

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

The winner of the October camera club competition was Norma Wing. November's competition is lightening. December there will be a Christmas Party, tenatively at the Flying W steak house. If you are interested in attending please contact either Roger Pittman or Kaye Thompson. January's competition will be waterfalls.

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

The crystal group meeting in November will feature a PowerPoint presentation on the crystal systems. The November meeting presentation will be a precursor to the January meeting presentation on crystal habits.

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

The faceting club will meet at Paul Berry's home Monday November 22 at 7:00. The address is: 1912 North Chelton
578-5466

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

The venue for the November 6th Lapidary Meeting has changed. The meeting will be at John White's house: 1127 Terrace Road. Same Time: 12-4 PM.

I have to be out of town and John has graciosly offered to hold this month's meeting. I am requesting that regular attendees confirm that they got this message. Please send me an Email at advanceone@adelphia.net. - Drew.

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

There is no Fossil Meeting in November, the 4th Thursday is Thanksgiving Day, and in December it's just before Christmas...so I split it between the two. We will meet on the 9th of December...nothing solid on where yet. I will let you know. - John

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

The Jewelry Group will meet Saturday, November 20, from noon to 4:00, at Rick Copeland's house 6608 Gambol Quail Dr E. This month's subject is bracelet construction.

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

President	Robert Landgraf	687-3195	RMLWP74@aol.com
Vice President	Drew Malin	531-7594	advanceone@adelphia.com
Secretary	Sidney Benda	488-9751	sid470@adelphia.net
Treasurer	James Bushnell	598-9262	bushy@pyramidpeak.com
Membership Secretary	Lorrie Hutchinson	382-3503	lorriehutchi@wmconnect.com
Managing Editor	Ethan A. Bronner	448-9949	CSMSpickANDpack@msn.com
Member-at-Large	Louis Severini	687-9491	
Member-at-Large	John White	630-0300	bluski2222@msn.com
Past President	Kaye Thompson	636-2978	
Show Chairperson	Manny Sanchez	495-7858	sandstonegemtec@msn.com
Field Trip Director	Roger Pittman	683-2603	roger_pittman@tmc.com
Librarian	Mary O'Donnell	689-7209	mod4185@compuserve.com
Camera Club	Roger Pittman	683-2603	roger_pittman@tmc.com
Crystal Study	Kerry Burroughs	634-4576	kburroug@adelphia.net
Faceting Group	Dave Wilson	635-7891	dlwilson@pcisys.net
Fossil Group	John Harrington	599-0989	haringtон1@mindspring.com
Lapidary Group	Drew Malin	531-7594	advanceone@adelphia.com
Micromount	Phil McCollum		acc@frii.com
Jewelry	Rick Copeland	332-7915	rick.copeland@covad.net

Events

3 Nov - Wednesday, 7:00
Board Meeting

6 Nov - Saturday, Noon
Lapidary Group

9 Nov - Tuesday, 7:30
Micromounts Group

12 Nov - Friday, 7:30
Crystal Study Group

18 Nov - Thursday, 7:30
General Assembly

20 Nov - Saturday, Noon
Jewelry Group

22 Nov - Monday, 7:00
Faceting Group

23 Nov - Tuesday, 7:15
Camera Group

25 Nov - Thursday, 7:30
Fossil Group

1 Dec - Wednesday, 7:00
Board Meeting

4 Dec - Saturday, Noon
Lapidary Group

10 Dec - Friday, 7:30
Micromounts Group

25th Annual
New Mexico Mineral Symposium

November 13 & 14, 2004
Macey Center
New Mexico Institute of Mining & Technology
Socorro, New Mexico

The general registration fee for the symposium is $25.00, the fee for seniors over 55 is $20.00, and the fee for students is $10.00 (with student ID). Registration includes a copy of the abstracts, two continental breakfasts, and coffee breaks. A cocktail hour and dinner will be held on Saturday, November 13, 2004. An auction to benefit the symposium will conclude the evening's activities. For more information, see the website:

http://geoinfo.nmt.edu/education/museum/minsymp/home.html

Ethan A. Bronner, Editor

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

Joining the Colorado Springs Mineralogical Society (CSMS)

General Assembly meetings are the third (3rd) Thursday of each month, except August, 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 13.

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