

The BACKBENDER'S GAZETTE

The Newsletter of the Houston Gem & Mineral Society Houston, TX

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June 2011



President's Message by Steve Blyskal

he smell of rain is PETRICHOR!

Haven't you missed it? Did you pull up a radar screen on Thursday the 11th in hope and anticipation of rain? For many, including farmers and ranchers, it was an answer to fervent prayers, and of course those who must water suburban lawns also appreciate rain. As I write this we have one last weekend of nice weather ahead of us, courtesy of the storm that came through Thursday. Never thought I'd be talking positively about rain—usually we hope it won't rain and spoil what we have planned.



I managed to get out on three field trips and now have

more than 100 lbs. of quartz crystals from Oklahoma and over 200 lbs. of petrified wood from South Texas, all needing cleaning or slabbing. This will keep Sig and me busy all summer and on into the fall. We didn't make it to Alpine or the Walker Ranch, and my garage is grateful it doesn't have to hold additional weight. I hope your collecting efforts have been equally fruitful and that you have a lot of things to clean or study during the long, hot summer that is coming all too soon. I hope I see you in the shop, air abrasives room, or metal room creating something new and interesting.

At the end of April I traveled to Austin at the invitation of the Austin Gem and Mineral Society to give a talk to their club. It was a neat experience, and I hope to repeat it next

Continued on page 4

Upcoming Programs

ay 24, 2011: Synthetic Quartz: Dean Lagerwall will discuss the formation and uses of Synthetic Quartz. Our culture relies heavily on the optical and electronic properties of pure quartz which necessitates the production of large amounts of synthetic quartz. Examples of large synthetic quartz crystals will be shown. Come learn how and why synthetic quartz influences your life.

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Every article published in the BBG is edited for grammar and content. No flaming is allowed. Editor: Phyllis B. George 22407 Park Point Drive Katy, TX 77450-5852 Phone: (281) 395-3087 Copy is due for the July 2011 issue by Wednesday, June 8, 2011.

E-mail the Editor and Webmaster at pgeorge4@comcast.net

Purpose of HGMS

The objectives of this Society are to promote the advancement of the knowledge and practice of the arts and sciences associated with the collecting of rocks, minerals, fossils, artifacts, and their identification and classification; the general lapidary art; the collecting and identification of gemstones; the designing and execution of jewelry or metalcraft; and to provide the opportunity to obtain, exchange, and exhibit specimens and rough or finished materials.

Membership dues are \$40 for an adult membership, \$60 for a couple, \$75 for a family (including all children aged 5-18), \$25 for a youth membership (ages 5-18), and \$500 for an adult life membership. Advertising rates: \$70 for 2 months, ¹/₄ page; \$150 for 6 months, ¹/₄ page.

MEMBER: American Federation of Mineralogical Societies & South Central Federation of Mineral Societies.

All meetings are held at the Clubhouse which is located at 10805 Brooklet near the intersection of Highway 59 (Southwest Freeway) and Sam Houston Parkway (Beltway 8). See the calendar inside the back page for when the different Sections meet. The General Meeting is the fourth Tuesday of each month at 7:30. The HGMS Web site address is **http://www.hgms.org**.

President's Message continued from page 1

year. AGMS is a vibrant club with their own clubhouse and shop, and 75 people showed up for my talk which I found rather amazing for a mineral-related presentation. They had been requesting this kind of talk, and really turned out. I was honored to be there and glad they enjoyed it and the six flats of specimens I brought with me as examples. My 20-year old slides and 35-yr. old slide projector were also a big hit. Sometimes the old technology works just fine. They run their meetings differently than we do, having the speaker go first and then having a break and the business meeting. I mentioned this at the last board meeting and found a surprising amount of support for considering this order. There is a survey going around on the e-mail list asking your opinion of this, and I hope you have stated your preference to the board. I was pleasantly surprised to see that most people stayed past my talk for the business meeting. I was staying overnight, but if I had needed to get back to Houston, their schedule would have allowed me to do it.

On the way back to Houston on Friday, I stopped at the Little Rock Shop and Gallery on Highway 71 outside of Smithville to see what new things Lorraine had obtained. If you have never been to this shop, you owe yourself a visit. She had a very nice selection of slabs, courtesy of a cutter in the College Station area. She also had a good selection of cutting rough, lots of Moroccan geodes, some minerals, and a fine selection of polished Indonesian petrified wood at very fair prices.

The following day I visited the Houston Fine Mineral Show, which set up in the Galleria area for the third year. I had a great afternoon working the HGMS table and talking to lots of people as they came through looking for the show. Please consider doing this at one of the shows where we set up. I always find it a rewarding experience. After the show closed on Saturday, I visited one of the dealer rooms and found a very nice selection of well-priced specimens from classic localities. I even found a couple New Jersey prehnites! Sunday was a busy day, trying to get to as many dealers as I could. There were lots of wonderful specimens to look at or drool over, and many great people to talk with. I hope you got by this show and had a great time. It is a chance to experience some of what the Tucson show is like, and it's here in Houston.

Mineral Section

by Paul Brandes

une 1: SWAP-NIGHT: Back by popular demand, we will have a Swap Night where excess material from our collections can be bought/sold/swapped. This will be an informal event and will be held inside. All sections are invited to participate and swap. Setup is from 7:00 to 7:30, and the formal meeting will be kept to a minimum to allow ample time for specimen exchange and socializing. Refreshments will be provided.

Upcoming Programs--Continued from page 1

une 28, 2011: To be announced.



Old Geezer -- Murchison Platform In North Sea

by John Emerson Member of HGMS

was the Project Engineering Manager for the design, construction, and installation of the Murchison platform in the North Sea. This write up is from the Bechtel report.

"The Murchison field, which straddles the line between the UK and the Norwegian sectors, is located 120 miles north east of the Shetlands in the most northerly region of the North Sea developed so far.

The development included both platform and subsea wells. A conventional fixed steel jacket with drilling, production, and processing facilities was installed.

The jacket had a launching weight of 21,000 tons and was installed in a water depth of 512 feet. This was the largest barge launched platform at that time.

The topside facilities with substructure and helideck comprised 16 modules with an aggregate weight of 24,000 tons. Facilities included gas/oil separation, water/gas injection, a 16-inch oil export pipeline to Dunlin platform and accommodation for 200 people.

In the autumn of 1976, Conoco awarded Bechtel the Murchison development project services contract. The contract included co-ordination of specialist engineering contractors, engineering support, procurement, contract preparation, planning and scheduling, cost control, construction supervision, and assistance with offshore installation, hook-up, and start-up services.

During the post engineering design phase, Bechtel was responsible for weight control and lifting calculations.

Production in the Murchison field started in September 1980 and now averages 110,000 bpd (barrels per day). This was the first use of the project services concept now popular with North Sea operators."

The jacket was built in Japan and barged to the construction site in Scotland. When the jacket was on location, it was piled in place before the modules were placed on top. The 16 modules were built in Scotland, Holland, France, and Italy. I did a lot of flying

to check on progress and quality control! Imagine the careful construction of the modules so that all of the connecting pipes, cables, and structures fitted exactly with each other when placed on the jacket at the final site.

The final cost was \$940,000, which was below budget. Imagine that if it cost that much in the late 70s, how many billions it would cost now!

My office was in Bechtel's headquarters in London.

Of interest: Conoco is pronounced Con-o-co in the U.S., but in England it is Co-no-co!



A Queen Trigger fish bit me on my leg while we were scuba diving off the Bahamas. "She" was mad because I had speared her and put her in my net bag. It took several stitches to close the two inch cut. Fortunately there was a trained "medicine man" in the crew of the ship. I am not sure if he was licensed, but he could stitch and bandage my wound. Once again, the end of my scuba diving for that trip.

Note: I am **not** accident prone while swimming!



Jewelry Classes by Brian Honsinger Education Director 281-777-0552

poor Charlie has been working so hard for me—and really for all of us—I am going to give him his week off. I, like all of you, should appreciate what these teachers do for this club. Earlier this month we had to cancel a Val Link class because not enough people signed up. We can't keep this wide an education opportunity open to ourselves if our classes go begging.

So our next Beginning Jewelry Class will start on Sunday May 22, take off for Memorial Day weekend, and then meet every Sunday in June from 12-5 p.m. The cost is \$375.00, but everything is furnished in the class, and you can even come in on Wednesdays and Saturdays during the course to practice your skills without paying a shop fee in the jewelry room.

I still need to also complete finding students for the Intermediate Jewelry class taught by Val Link that starts Sunday July 10, 17, 24, 31, and August 7. Its cost is \$375.00, and everything is furnished. It will meet 12:00-5:00 PM on those Sundays. Like above, these students can use the jewelry classroom on Wednesdays and Saturdays during the class with no charge.

Please call me immediately at 281-777-0552 to get your spot reserved in either of these classes. You must do it right away as I leave for Colorado May 21 and will not return until after both these classes have begun. I will really have a difficult time helping anyone while on this trip. Lots of our camping is in Colorado back country where Internet has not yet been piped in, and even cell phone service gets a bit spotty.

Daylight Section

2011 Summer Riveting Program with Val Link Starts June 20, 2011—NOTE: 3rd Monday!

The HGMS clubhouse will be open Monday June 20 from at least 1:00 p.m. through the end of the Lapidary meeting that begins at 7:30 p.m. The usual fees apply for use of the Shop during Open Shop time.

Supplies and Equipment Needed for our Summer Program (June - August)

1. Round Tubing, 16 gauge outside diameter (OD), 1 foot; 14 gauge OD, 1 foot

2. Solid Wire, 12 gauge OD, 1 foot; 16 gauge OD, 1 foot

If you plan to use sterling, then buy sterling wire and tubing. If you plan to use copper, then buy copper tubing and wire. Copper supplies can be obtained from model shops. This is for the overlay.

3. Riveting hammer

4. Regular hammer

5. Steel Rod, 3 to 4 inches long, depending on hand size. I think I have enough for everyone.

6. Sheet metal, 20 gauge for bracelet, sterling or copper, 6 x 6 inch piece.

7. Overlay, 20 gauge, contrasting color. For example copper riveted to sterling. 6 x 6 inch piece.

8. The copper and I think the brass also can be bought at hobby shops.



Magnetic Holder for Files

by Brad Smith More BenchTips by Brad Smith are at groups.yahoo.com/group/BenchTips/ or

facebook.com/BenchTips

n easy way to keep all your files organized at the bench is to use a magnetic tool strip. They're not expensive and help keep a lot of small tools from cluttering the bench top. I got a couple of them from Harbor Freight for about \$5 each. See http://www.harborfreight.com/18inch-magnetic-holder-65489.html

Only regret was putting some of my small drills on the magnets. The drills got a little magnetized and



now stick together when I carry them in a bottle in my tool box.

Finishing Pierced Patterns: After sawing patterns, there's always a little cleanup to do. Needle files (7-8 inches) can get into the larger areas, and escapement files (4



inches) can get into some of the corners. But I often find myself looking for even smaller files. Couldn't even find them at a watchmaker tools supply company, so I had to try something else. I ended up grinding down the tip of a 4" barrette file. Use a separating disk (or cutoff wheel) in your Dremel or Foredom.

The wheels are inexpensive and do a great job grinding steel (poor at soft metals like silver). The disks have other uses like

modifying pliers and making design stamps. My preference is the one-inch diameter ones as shown at

http://www.ottofrei.com/store/product.php?productid=3919&cat=3439&page=1

Be sure to hold the wheel firmly so nothing moves to break the disk, and definitely wear your safety glasses. A flake of steel in your eye makes for a bad day.

Archeology Group Meeting Minutes

May 5, 2011 submitted by Vice-Chairman Terry Proctor in the absence of Archeology Group Secretary, Melissa Sambrooks

The meeting was called to order by Chairman Garth Clark. Present were Chairman Clark, Vice-Chairman Terry Proctor, Burton Dworsky, Deidre Prince, Kemp Maer, Bill Moore, Mike Dawkins, and new member Jon Hart who also put on the program for the evening.

Terry Proctor moved to approve the minutes from the April 7 meeting, seconded by Mike Dawkins, and it passed unanimously.

The successful first field trip of the Archeology Group was discussed. Ten people made the trip to McFaddin Beach. There were shells, fossils, and possibly an artifact found on this trip on April 2, 2011. The Archeology Group is tentatively planning another trip to McFaddin Beach on June 4, 2011. Anyone interested should contact Terry Proctor at his law office 713 453-8338 for information and to confirm intent to go on that field trip.

Terry Proctor brought the first issue of *Archaeology* magazine to which he had subscribed. He briefly discussed a couple of articles. One was "On the Birth of Art" and had photos of the Chauvet Cave in Southern France, where the artwork is 20,000 years old. There are lions, bison, rhinoceroses, and horses. Some are done with such elegance as to appear 3-D. It is cause for scientists and historians to think again about when humans developed artistic sensibilities. Another article was regarding the military personnel's ability to visit the original Ziggurat in Iraq. When Saddam Hussein was in power, very few persons were allowed to see it, and he was redoing other ancient sites. However, this site remained intact and now is allowed to be visited by U.S. military personnel. An officer wrote a very interesting article on it. Terry encouraged other members of the Archeology Group to subscribe to *Archaeology* magazine which is \$23.95 for a 1-year subscription and \$39.95 for a 2-year subscription.

Jon Hart presented the program. He has attended Archeology Group meetings before, but he joined HGMS at this meeting. Jon displayed five cases of arrow and spear points. Some of these he dug, and some he purchased. He dug at the Ignacio Sanchez location called the Barksdale location, about 50 miles north of Uvalde, Texas on the Nueces River. Jon made clear that what are called "arrow heads" usually are actually spear points and what are called "bird points" are actually the arrow heads. Arrowheads would have been too heavy to shoot on arrows and were only created in the last few hundred years.

What are called "arrow heads" are spear points, knives etc. and go back over 9,000 years or more, depending upon what a given point is and where it came from. Jon discussed screening for points and artifacts and digging for same. He advised in digging to use a "wiggle pick" instead of a paleo pick so there is less chance of destroying the

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point or artifact. He suggested getting in touch with a site called "Austin diggers" to find out where to dig and what is going on. Jon also took time to go over the panels which Terry Proctor brought that had been given to him several years back by a lady whose deceased husband had collected them for over 50 years, mostly in Harris County. This was very helpful and important, and Terry and the Proctor Museum of Natural Science appreciated this after-the-meeting assistance in going over these hundreds of points.

The next meeting of the Archeology Group will be on June 2, 2011. At that time Chairman Garth Clark will bring his Mexican "Texas" coin, minted in San Antonio before the Texas War of Independence. This copper coin is one of only about five in existence (and is in excellent condition). He will discuss early Mexican "Texas" money.



(I to r) HGMS Archeology Group members Burton Dworsky, Deidre Prince, Dr. Garth Clark, Jon Hart with his arrow and spear points, Kemp Maer, looking on at Jon Hart's displays of points.



Photo 3652 (I to r) HGMS Archeology Group members Burton Dworsky, Deidre Prince, Mike Dawkins, Dr. Garth Clark, Bill Moore, Jon Hart with his arrow and spear points, Kemp Maer, looking on at Jon Hart's displays of points (photo did not show the points).

Beat the Heat Swap meet!

by Matt Dillon

veryone is invited to come and swap, trade, or sell your rock-related items, stones, minerals, fossils, equipment, tools, or whatever you need to get rid of in the parking lot of H.G.M.S. on Sunday, May 22, between 9 a.m. and 3 p.m. (it will be hard to beat the heat if we stay any later!!!)

We always have plenty of room for folks to set up a tailgate, and we know you will enjoy coming regardless of what you have to bring even if it is only cold, hard-cash!

Cold beverages can be purchased inside the clubhouse (50¢ each) and are located in the refrigerator. Some snacks will be provided by those who offer to bring something to share. There should be plenty of hot coffee and donuts early, and pot luck after that.

For more information, please call Matt Dillon at 713-682-8043.

Board of Director's Minutes

May 3, 2011 by Sarah Metsa HGMS Secretary

/he meeting was called to order at 7:30 p.m. with a quorum of seven members present.

| X | President – Steve Blyskal | X | Beading Rep – Jillynn Hailes |
|---|---|---|----------------------------------|
| X | 1st Vice President – Ray Kizer | X | Faceting Rep – Gary Tober |
| X | 2 nd Vice President – Beverly Mace | | Lapidary Rep – Phyllis George |
| X | Treasurer - Rodney Linehan | | Mineral Rep – Sigrid Stewart |
| X | Secretary – Sarah Metsa | X | Paleontology Rep - Terry Brawner |
| X | Past President - Terry Proctor | X | Day Light Rep - Nancy Fischer |

Previous Month Board of Directors Meeting Minutes: The minutes of the April 5, 2011 Board Meeting were published in the May 2011 BBG. Terry Proctor moved to approve the minutes of the previous meeting as published. Jillynn Hailes seconded the motion, and it carried unanimously.

Treasurer's Report: Treasurer Rodney Linehan reported on the club's financial condition. We are in good shape financially. Dealer funds from the show are still coming in.

Officer, Committees and Section Reports:

Beading Section: The May project is listed online, and all are welcome to attend.

Daylight Section: The Daylight Section advises that they would like to see the clubhouse get subscriptions to *Lapidary Journal Jewelry Artist* magazine, *Rock & Gem magazine*, a wire wrap magazine, and a gems and gemology magazine.

Faceting Section: The April meeting was a general show and tell, discussion, and FAQ meeting. Also in April, Faceting had an auction that raised more than \$800. The May program is the transfer and wax dopping educational program. Bring your own tools if you have them.

Mineral Section: The May4 meeting will be an auction of specimens provided by members, and proceeds will go to the Mineral Section. The May 18 meeting will be dedicated to completing assembly of the 50 mineral sets for schools and teachers. Pete Stassi and Jim Kendall have both put a lot of time into the assembly of these sets and it is appreciated.

Paleo Section: The April program was put on by Scott Singleton and it was about identifying petrified wood. The Lake Texoma field trip was very successful due to the very low water tables. The May Paleo program will be a "Paleo 101" educational program.

Youth Section: There was a good turnout and everyone used the grinding wheels.

Archeology Group: The group had a field trip to McFaddin Beach on April 2, 2011. Ten people made the trip and some good finds were made by those making the trip. Everyone went home happy and ready for another field trip to this location. The next meeting is May 5. The Archeology Group has been having really good programs on current archeological finds and another good session is planned for this next meeting

Communications Director Report:

Education Report: Brian Honsinger was not in attendance but he sent word that the Val Link fabrication class was canceled due to low enrollment.

Show Committee: The Committee Chairs will bring a new show signup list to the office the weekend of May 6^{th} . The Houston Fine Mineral Show was a big success and we had several new members enroll at the show. A dealer at the show, Bill Metropolis from Massachusetts, donated several flats of specimens to the club.

Quartermaster Report: The kitchen is almost finished being reorganized and inventoried. A "Supply Request Box" has been put on the small table in the kitchen. If a member notices something will soon be in need of replacement, please put the request in this box. If something is needed immediately, please send an e-mail to quartermaster@hgms.org and place the request.

Old Business:

Roof: Steve Blyskal has not been able to meet with Mr. Soriano in order to secure a copy of his insurance certificate. Once that is verified, Steve will authorize the work to repair the roof.

General Meeting Programs: An e-mail will be sent out in order to gather ideas as to the types of programs members would like to attend. The May program is still being organized.

Library: Sigrid Stewart is talking with the librarians at Chevron to see if they would be interested in volunteering as the HGMS Librarians.

Outreach Programs: The Outreach Program is still being utilized by schools and organizations. Terry Proctor gave a program at Harvard Elementary and there were about 70 children in attendance.

New Business:

Program Speakers Budget: In order to retain a greater diversity of general meeting program speakers, a small budget was approved in order to compensate the speaker for their travel and food expenses. Nancy Fischer moved and Ray Kizer seconded that the approved total budget be \$1,000.00 with the Board approving each speaker's anticipated costs via e-mail discussion prior to the speaker being booked. The motion passed unanimously.

Rocks & Minerals Magazine: In the past the Mineral Section has donated \$1,000.00 annually to the *Rocks & Minerals* magazine to be used toward the costs of color in The

Connoisseur's Choice column. In 2011 the donation was recognized as "HGMS in memory of Art Smith". This is something that the Mineral Section would like to continue although they are unable to sustain the full donation amount. Ray Kizer moved and Terry Proctor seconded a motion that an annual auction will be held in August to raise funds for this purpose and dedication. The motion passed unanimously. An e-mail will be sent regarding donations of any and all appropriate and relatively related items.

Action Items were assigned.

Adjourn: Terry Proctor moved and Terry Brawner seconded that the meeting be adjourned. The motion passed unanimously. The meeting adjourned at 9:35 p.m.

About Water and Minerals

by Kempton H. Roll

from Mountain Mineral Monthly 01 & 02/97, via AFMS Bulletin Editors Articles, 1998 – And This Is What They Wrote, via The Rockpile, 11/98, via StoneyStatements 5/2011. (It received the 2nd Place trophy in the Adult Articles category of the 1998 AFMS Contest.)

ater is a strange and fascinating chemical. It could be said we're living on a misnomer; that our planet should have been named "Water" instead of "Earth." In its liquid and solid form, water comprises about three-quarters (72 percent) of Earth's surface. It's the main reason why our planet is such a beautiful blue "marble" when seen from outer space. Down here, water is the chemical we depend on for survival, if not our very existence. We drink it. We cook much of our food in it food which couldn't have grown without it. We wash ourselves, our clothes, and our dishes with it. We can swim in and sail on it in the summer and skate on it in the winter. It can rain on us when it's warm or make us shovel it when it's cold. When heated sufficiently it can undergo a phase change—turning from a liquid to a gas (steam). Here in the mountains, water boils at a slightly lower temperature because the atmospheric pressure is slightly lower. In a vacuum (no pressure), water can actually "boil" at room temperature!

When the pressure is increased, such as in a locomotive boiler or a pressure cooker, it takes a higher temperature to make the water boil. But it will still change phase and turn into a gas. The vapor confined causes the pressure to increase so the inside temperature can rise higher than 212 degrees. The higher the pressure, the higher the water temperature must be in order to go through its phase change.

However a strange thing happens to water when both the temperature and pressure are raised above a certain point, known to mechanical engineers as its "critical point." At these extremes, water no longer undergoes a phase change from liquid to gas. It remains liquid! This phenomenon takes place at 705.4 degrees F and 3206.2 psi pressure (more than 218 atmospheres). Mechanical engineers call the resulting liquid medium "water substance" (J. Gieck, *Invention & Technology*, Vol. 12, 1996). It is no longer ordinary water.

Water Substance

While "water substance" is important to the mechanical engineer, it appears that it might also have a very special meaning for the geologist and mineralogist. It may help explain why, deep in the bowels of some parts of the earth where temperatures and pressures exceed the "critical point," water can still be present as a liquid. Leonard Wiener, a recently retired geologist with the NC State Geological Survey, calculates that to attain critical point pressure (3206.2 psi) water alone, without heat, would have to be at a depth of about 7,500 feet or nearly 1½ miles below the surface. Typical rock, he notes, exerts critical point pressure at a depth of roughly 2,700 feet or about ½ mile. So water confined under a rocky overburden at this depth would have reached its critical point, pressure-wise. Add heat so that the temperature of this trapped water can reach at least 705.4 degrees F, and its liquidity will be assured by the higher pressure. It now becomes "water substance."

Returning to liquid water's ability to dissolve solids, every tea drinker knows that sugar dissolves more easily in hot tea than in cold. This is because all chemical reactions, including dissolution are influenced by temperature: the higher the temperature, the more rapid the rate of reaction and the more solids the liquid can hold in solution.

If water's ability to dissolve solids is enhanced at higher temperatures, then it makes chemical sense that water, or "water substance" to be more precise, deep down in the earth enjoys a greater capability of dissolving minerals like quartz and even metals like gold. In contrast, up on the surface that same chemical H_2O , under normal temperature and atmospheric conditions, even when boiling, can at best dissolve only tiny traces of quartz, for example. A "noble" metal like gold is virtually insoluble.

Another condition that could play a role in the deep earth dissolving process is the pH factor. How acid or alkaline is this "water substance?" There are two answers: "We have no way of knowing," and "It depends on what other chemicals are present." Either way, high or low pH, more "hydrothermal" (water + heat) chemical reactions will tend to take place which would lead to the formation of more, often exceedingly complex chemical/mineral combinations. It's only when these aqueous solutions subsequently work their way up to the higher reaches, cool down and solidify (hopefully crystallize), that we can appreciate their complexity and enjoy what Mother Nature and Father Chemistry have created for us down below.

Magmatic Water

Surface water is essentially indestructible. It may not be in the right place at the right time, too much or too little, but it's always there, even if it's just in the form of clouds floating in the sky. On the Earth's surface and at temperatures higher than 212 degrees F, water simply turns to vapor and escapes into the atmosphere. It does this even at lower temperatures in the form of humidity. Too low and it returns to its original liquid

Get last-minute news about club events by sending a note to Neal Immega at <u>n_immega@swbell.net</u>.

state, i.e., fog and clouds, or if the air is really saturated, rain. Drop the temperature still further, and it changes phase again and becomes solid, falling as snow or hail.

With all of these forms of water so readily accessible on the land, in the sky and in the rivers and oceans, if the Earth is essentially solid, how does any of this water get down to those depths where "hydrothermal" mineral formation can take place? It doesn't.

Some surface waters will work their way deep within seemingly impervious rock formations. Most mines, even the deepest, usually encounter water; however, such waters cannot possible reach "critical point" conditions. Certainly the temperature would be much too low. Instead, "water substance is literally liberated or created by chemical reaction down in the mantle itself where high temperature/high pressure reactions are constantly taking place. Bill Miller notes that such water molecules can come from OH groups or H_20 in minerals (mica, amphiboles, etc.). Then, he adds, there is "juvenile" or magmatic water—"original water"—formed deep within the earth, which has a different isotopic signature than meteorological water. Some of it also originates as hydrogen and oxygen gases released through chemical reactions that can recombine to form water and heat energy. While most volcanoes—"the safety valves for these subsurface chemical reactions—spew an assortment of subterranean gases and solids out into the atmosphere; the most voluminous gas is almost always water vapor in the form of steam. This is magmatic water. It may end up as rain and drinking water, but it did not start out that way.

If not ejected violently, magmatic water formed at the extremes of pressures and temperatures encountered deep in the earth's reaction chambers will remain in the liquid state, not as ordinary water, however. It is "water substance" and as such becomes the solvent—"super solvent"—that seems capable of dissolving a far more impressive array of chemical elements and compounds (minerals) than its surface counterpart. The great pressure encountered at these depths can force a saturated liquid substance to work its way upward, taking the nearest path of least resistance, percolating through fissures and cracks in matrix rock dislocations created by plate tectonics. Or it can collect in vugs left by gas pockets.

At some point, when conditions have changed from high temperature/high pressure to lower pressure and temperature, especially the latter, the above process reverses itself. What went into solution now has to come out.

Whenever any liquid is saturated—dissolved as much as it can—those solids in solution will precipitate out when the temperature drops. Rock candy crystals, for instance, begin to "grow" when a hot, saturated sugar solution cools down.

In the case of subsurface saturated "water substance," if the escape action is not associated with volcanic activity, but instead the liquid remains trapped beneath rock overburden, as it nears the cooler upper regions, it will begin to "freeze" and allow the chemicals in solution to precipitate as solids. Now they turn into "minerals" for the rockhound and "ore bodies" for the miner. Minerals held in solution may ultimately precipitate out as vein deposits or interstitial deposits, and sometimes, if the rate of cooling is just right and if there is room, they form into large, multi-faceted crystals. If we rockhounds are lucky, we may someday find some of them.

While the chemical known as "water" plays a vital part in our lives, in the form of "water substance" it may be even more important because of its ability to create so many of the minerals and crystals we enjoy collecting. It is a most powerful substance; yet, strangely, one which we mortals destined to live out our lives up here on Earth's surface will never see or feel or taste, even though we drink tame versions of it every day—long after Mother Nature has finished with it down below.

All Roads Lead To Colorado Springs: RMFMS 2011—Planning Your Trip by Dr. Mike Nelson, CSMS & LGGMC from Rocky Mountain News 4/2011

n June 2011 the Colorado Springs Mineralogical Society will host the annual meeting and show of the Rocky Mountain Federation of Mineralogical Societies (RMFMS). Members and visitors traveling to Colorado Springs will be able to observe a wide variety of geological features and several field trips are in the planning stages. This article, part of a series, will give participants a chance to preplan their itinerary of exploring the local geology.

I have been working for several weeks on constructing an article that could explain mineral and fossil collecting rules on Colorado lands managed by federal agencies. I thought that such a job would be straight forward and comparatively easy due to the passage of the Omnibus Public Land Management Act (OPLMA) of 2009, Public Law 111-011and its subsection P.L. 111-011, Title VI, Subtitle D on Paleontological Resources Preservation (PRP). However, I was mistaken about "being easy." The more that I delved into the issue, the more confused I became.

Therefore, this article has as its major focus the lands managed by the Bureau of Land Management (BLM). The BLM is a major land stakeholder in 10 western states and Alaska (and Texas too. At my last count, the Agency administered ~258 million acres of public land. In my home state of Colorado, the BLM manages ~8.4 million acres, including several components of the National Landscape Conservation System (NLCS)-created in 2000 to conserve, protect, and restore nationally significant landscapes recognized for their cultural, ecological, and scientific values. NLCS areas are congressionally- or presidentially-designated and include Wilderness Areas, Wilderness Study Areas, National Conservation Areas, National Monuments, and National Scenic and Historic Trails. In addition to NLCS lands, there are other BLM special land designations such as Special Recreation Management Areas, Travel Management Areas, and Areas of Critical Environmental Concern. In Colorado, about one million acres of BLM land is designated as being a part of the NCLC (about one-eighth of total BLM acreage). Perhaps the best known of the BLM "special designation" lands are the Wilderness Areas (WA). The "wilderness" designation came about in 1964 when President Lyndon Johnson signed into law the National Wilderness Act. This legislation created a category of federal land to ensure long-term protection of natural landscapes.

The Wilderness Act is well known for its succinct and poetic definition of wilderness: "A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and community of life are untrammeled by man, where man himself is a visitor who does not remain."

There are five BLM wilderness areas in Colorado—Black Ridge Canyon Wilderness (75,550 acres on the northwest flank of the Uncompahyre Plateau); Dominguez Canyon Wilderness (66,280-acre expanse located within the Dominguez-Escalante National Conservation Area); Gunnison Gorge Wilderness (14 miles through the black granite and multi-colored sandstone double-canyon system of the Gunnison River); Powderhorn Wilderness (glacier carved landscape in northern San Juan Mountains); and the Uncompahyre Wilderness (high peaks of the north central San Juan Mountains). In addition, the U. S. Forest Service and other agencies manage about 38 other official WA in Colorado.

The Wilderness Study Areas (WSA) in Colorado contain more than 548,000 acres and total 54 in number. These tracts were established through the Federal Land Policy and Management Act of 1976 (FLPMA), which directed the BLM to inventory and study roadless areas for wilderness characteristics.

Congress makes the final determination on converting a WSA to a WA; and, therefore, the BLM manages these areas to preserve their suitability for possible designation as wilderness. However, some activities are often allowed in WSA that are prohibited in WA, for example new mining claims are permitted.

National Conservation Areas (NCA) are designated by Congress to conserve, protect, enhance, and manage public lands that have varied landscapes with exceptional natural, recreational, cultural, wildlife, aquatic, archaeological, paleontological, historical, educational or scientific resources. There are three NCA in Colorado: Dominguez-Escalante National Conservation Area; Gunnison Gorge National Conservation Area; McInnis Canyon National Conservation Area.

The Antiquities Act of 1906 grants the President authority to designate National Monuments (NM) in order to protect "objects of historic or scientific interest." While most NM are established by the President, Congress has also occasionally established national monuments protecting natural or historic features. Colorado has one NM administered by the BLM: Canyons of the Ancients (in southwestern Colorado). Of course, there are others NM-managed by the U. S. National Park Service.

The BLM is one of several agencies responsible for managing National Scenic and Historic Trails (NSHT). Colorado has two NCHT: The Old Spanish National Historic Trail and The Continental Divide National Scenic Trail. The BLM divides Colorado into 11 Extensive Recreation Management Areas (RMA). Most of these public lands are available for use by recreationists, including rock hounding, with few restrictions.

A limited number of more heavily used areas are identified by the BLM as Special Recreation Management Areas (SRMA), of which Colorado has several. These areas of significant natural or historical resources are managed more intensively for the protection of their resources. One of the best known SRMA in Colorado is the 80 miles

associated with the Arkansas River between Royal Gorge and Cotopaxi. This SRMA encompasses the most popular recreational river in Colorado, one offering kayaking, whitewater rafting, and fishing opportunities in canyon and valley settings.

The BLM also has the authority to establish and manage Areas of Critical Environmental Concern (ACEC), a unit designed to highlight areas where special management attention is needed to protect, and prevent, irreparable damage to important historical, cultural, and scenic values, fish, wildlife resources, or other natural systems or processes; or to protect human life and safety from natural hazards.

The BLM manages Research Natural Areas (RNA) where the objectives are:

• to preserve examples of all significant natural ecosystems for comparison with those influenced by man;

• to provide educational and research areas for ecological and environmental studies; and

• to preserve gene pools of typical and endangered plants and animals.

The BLM in Colorado protects, among others, "exceptionally large and well-preserved fossils of Cretaceous giant ammonites (Placenticeras spp.) and many other groups of marine invertebrate fossils, including nautiloids, bivalves, and gastropods at the Kremmling Cretaceous Ammonite Locality (a RNA)."

If all of this alphabet soup is confusing, please realize these land designations are used by the BLM (I am certain there are more), and then there are many other land tracts managed by the U. S. Forest Service, the U. S. Fish and Wildlife Service, the U. S. National Parks, and a variety of other federal agencies. I have a tough time sorting out this entire conglomeration but would refer readers to an earlier article (on the new OPLMA-PRP in the CSMS Pick&Pack, 2009, v. 4) as a starter.

In general, the BLM allows rock hounding on agency-managed lands, with the exception of developed recreation sites and special management areas or where otherwise prohibited and/or posted (this example is from regulations clearly stated by the Grand Junction Field Office):

• semi-precious gemstones, petrified wood, common invertebrate, and plant fossils may be collected on public lands without charge or permit in reasonable amounts as long as the specimens are for personal use only and cannot legally be sold or bartered.

• no undue or unnecessary degradation of the public lands is allowed during the removal of rocks, minerals, gemstones, or fossils.

• collection and removal must be done by hand tools only and cannot be aided with motorized or mechanized equipment. Metal detectors are acceptable except on historical sites.

• the removal of vertebrate fossils requires a permit.

Furthermore, the BLM Grand Junction Field Office has defined reasonable amounts

for rocks, minerals, semi-precious gemstones, and common invertebrate and plant fossils as quantities that can fit into a five gallon container. Collecting materials in excess of a five gallon container requires a permit and fee.

These regulations from the Grand Junction Field Office seem rather straight forward and most BLM jurisdictions have similar verbiage—for "ordinary" BLM-managed lands. But there are differences. For example, the St. George, Utah, Field Office defines "reasonable amount" as specimens fitting into the trunk of a car. This leads me to believe that individual BLM field offices or districts may have the ability to establish their own regulations. This question is something that I hope to pursue.

The kicker in the BLM collecting regulations is the phrase "with the exception of developed recreation sites and special management areas or where otherwise prohibited and/or posted." What this means is that individuals interested in rock hounding on BLM-managed lands really need to look at the individual units for specific regulations—but many times these regulations are somewhat tough to locate. Some regulations are fairly easy to understand; most, if not all, RNA and National Monuments do not permit causal collecting of specimens. Likewise for ACEC. But what about WA and WSA (which is what I really intended this article to feature—but it got away from me)?

But, and this is of interest to rockhounds, collection of common rocks and minerals, and I "presume" common invertebrate fossils, is permitted in WA as follows: From 12/14/00 BLM Part III Final Rule 43 CFR 6300 Sec. 6302.15 You may remove or disturb natural resources for non-commercial purposes in wilderness areas, including prospecting, provided—

- you do it in a manner that preserves the wilderness environment, using no more than nonmotorized hand tools, and causing minimal surface disturbance; and
- your activity conforms to the applicable management plan; or
- you have a BLM authorization if one is required by statute or regulation.

This would imply to me that simple, non-disturbing collection of minerals in WA is "OK." But, and this is a BIG but, please do your research and read the regulations as some areas may prohibit collecting, and all areas prohibit vehicles.

Now, there is a new BLM player in the game since on 22 December 2010 Secretary of the Interior Ken Salazar (the BLM is part of Interior) issued ORDER NO. 3310 entitled Protecting Wilderness Characteristics on Lands Managed by the Bureau of Land Management. This order "directs the Bureau of Land Management (BLM), based on the input of the public and local communities through its existing land management planning process, to designate appropriate areas with wilderness characteristics under its jurisdiction as Wild Lands and to manage them to protect their wilderness values." In addition, "the Order affirms that the protection of the wilderness characteristics of public lands is a high priority for the Bureau and it directs the agency to protect wilderness characteristics through land use planning and project-level decisions."

Part of the mission of the BLM is to maintain a current inventory of land under its jurisdiction and identify within those inventory lands with wilderness characteristics. The BLM is then going to describe such inventoried lands as "Lands with Wilderness Characteristics," share this information with the public, and integrate this information into its land management decisions. Where the BLM concludes that protection of wilderness characteristics is appropriate, the BLM could designate these lands as "Wild Lands." The BLM is going to develop recommendations, with public involvement, regarding possible Congressional designation of Wild Lands into the National Wilderness Preservation System (WA).

Secretary Salazar said the agency will review some 220 million acres of BLM land that's not currently under wilderness protection to see which should be given a new Wild Lands designation—a new step for land awaiting a wilderness decision. Congress would then decide whether those lands should be designated permanent wilderness areas.

This action has not gone over well with many groups advocating open access to public lands. For example, the Motorcycle USA Group believes "anti-access advocates have been abusing the legislative process to ban responsible off-highway vehicle (OHV) recreation on public land. This new policy may restrict responsible off-highway riding in the affected areas." As a personal side note: In my opinion one of the major aspects of the Wild Lands designation is to curtail the vast amount of off-trail riding by OHV enthusiasts!

In the area of letter writing, nearly 60 federal lawmakers joined forces to ask Department of Interior Secretary Ken Salazar to withdraw a recent order creating a new landuse designation that could bar responsible off-highway riding from public land. The riders believe that Wild Lands will turn into Wilderness Areas, where roads and motorized vehicles are banned.

Some congressmen and senators were also disturbed and in a letter dated Jan. 28, Rep. Rob Bishop (R-Utah), the outgoing chairman of the Congressional Western Caucus, Sen. John Barrasso (R-Wyo.), chairman of the Senate Western Caucus, and 47 other House members and eight other senators asked Salazar to rescind Secretarial Order 3310. This group believes there is an ongoing effort by Secretary Salazar, and the current administration, to circumvent Congressional authority by creating new public lands policies. The congressional group also believes these unilateral decisions by the Secretary regarding the management of public lands and resources will be detrimental to communities and businesses throughout the West.

Many western state governors who also criticized the Act are perhaps best exemplified by Wyoming Governor Gov. Matt Mead who stated "that the new policy ignores the impact that Wyoming's natural resources have on the national economy and on how dependent local and state governments are on tax revenue from energy industries." He also said "a Wild Lands designation will further drag out (if not permanently halt) the permitting process while local economies suffer. The BLM currently does not have the appropriate resources or track record for approval of plans and projects; and this will only make the problem greater and delays longer." On the other hand, 73 elected officials from Colorado wrote to thank Interior Secretary Ken Salazar for Secretarial Order 3310. These officials believe the Order restores "the path toward protection for wild lands across the West and acknowledges the important role of wilderness in the multiple uses of our public lands." In addition, 67 elected officials from Arizona, Montana, Nevada, New Mexico, Utah, Washington, and Wyoming signed a letter of support for Secretarial Order 3310. This group of state leaders recognized that "Wild lands provide an important economic engine in the West and across the entire United States—visitors come from around the nation and world to visit our prized landscapes, and tourism has remained a reliable economic driver for generations."

If I understand the new Secretarial Order 3310 correctly, these inventoried BLM lands may be designated Wild Lands that may become Wilderness Study Areas or Wilderness Areas. Since WA and WSA are treated about the same, what does it mean for rockhounds? My interpretation is that surface collecting of minerals and simple panning for gold will be permitted; however, disturbance of the ground will not be allowed—no digging of holes or small shafts. Can you collect common fossils? I am uncertain. Can you break mineral specimens from a larger rock? Stay tuned! And, perhaps most importantly, collectors will need to walk to the areas as roads will be closed and vehicles will not be allowed (my opinion). But again, there could be special regulations attached to any Wild Land designation that would prohibit collecting. Keep watching the news!

One of my favorite old timey TV programs was Dragnet, and I am reminded of Sgt. Joe Friday's admonition: "The facts ma'am, just the facts." I have found that locating the facts concerning mineral and fossil collecting on public lands is an onerous job. It is quite easy to find regulations concerning camping or fishing or even off-road travel; however, one must really hunt for regulations concerning mineral and fossil collecting (the specifics). I had hoped that the OPLMA-PRP would help clear the air and better define regulations. But unfortunately this may not be the case as some regulations seem to vary between states and even districts, and some are quite vague. The best-case scenario is that the Agency is still drafting specific regulations. The bad "thing" is that these regulations seem to be spread over numerous Web sites and it sometimes takes hours to track everything down. In addition, there are the contradictions that fuel my confusion: one BLM Web site states "that WSA support a wide variety of recreation uses... activities such as hunting, fishing, hiking, horseback riding, backpacking, camping, nature study, rock hounding, photography, and climbing. Off-highway vehicles and bicycles may be used on designated routes." However, another BLM site states "What activities are prohibited within a WSA? Removal of mineral material (rocks, gems, fossils)." The facts ma'am, just the facts.

Since so many people engage in collecting rocks, minerals and fossils, I certainly would like to see uniform rules published, in a prominent location, on BLM state and district Web sites. The "rock hounding section" of a Web site really needs major highlighting as other recreation activities such and camping or fishing display. And finally, it appears that, at least to me, several other federal land agencies lag behind the BLM in explain-

ing and publishing correct collecting rules. But this is a story for another time.

The views expressed in this article belong to the author alone and do not reflect views/ opinions of the CSMS, LGGMC, or RMFMS. I really appreciate the land managing activities of the BLM as the organization is trying to please a variety of constituents. My hope is that the Web sites of various BLM units will recognize rock hounding as a legitimate and widespread recreational activity and clearly state uniform collecting regulations of minerals, rocks, fossils, and gold. For example, the Agency is very clear on how much petrified word one may collect: Petrified wood can be collected too for personal use—up to 25 pounds each day, plus one piece, but no more than 250 pounds in any calendar year (43 CFR 3622). What is not clearly stated is on what parcels of land wood may be collected!

The information contained in this article came from a variety of BLM Web sites, and I have tried to interpret rules to the best of my ability. But again, rockhounders should closely follow BLM Web sites and if possible, visit with BLM officers. If you are coming to Colorado to collect on public lands, do your homework!

Cited below are a few interesting Web sites.

Wilderness Act: http://www.blm.gov/nv/st/en/fo/ely_field_office/blm_programs/wilderness/wilderness_act_of.html

Collecting trilobite fossils in a WA: http://www.geo-tools.com/13-03.htm

Wild Lands BLM draft manual for land inventory: www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&PageID=116071

Wild Lands BLM draft planning manual: www.doi.gov/news/pressreleases/ loader.cfm?csModule=security/getfile&PageID=117194

Fossil collecting on public lands: http://www.blm.gov/wo/st/en/prog/more/CRM/pale-ontology/fossil_collecting.html

Paleontology laws about fossil collecting http://www.blm.gov/wo/st/en/prog/more/ CRM/paleontology/paleontological_laws.html

Wilderness Study Areas http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS/ wilderness_study_areas.html

Hints & Tips

Eliminating Flats by Ted Robles via The Calgary Lapidary Journal 5/2011

while back, someone was saying that he was having problems with getting "**flats**" on his cabs, that there was insufficient "**give**" in his wheels, and it didn't seem to make any difference no matter how much pressure he applied.

That was his first mistake. Diamond and corundum are two different animals; rela-

tively speaking, about the same difference between quartz and chalk. If you "**lean into**" a diamond wheel, you will get lousy results (flats, etc) on your stone, and your wheels will wear out long before their time. On diamond, you try to do your cutting (and everything else) by almost not touching the wheel. Use essentially no force. Don't "**grind**" the stone, let the diamond wear it away, but keep it spinning. The technique is simply to use the whole face of the wheel, and keep your cab moving. Any time you stop, you just bought a "**flat**."

Can't help it! It is the same principle as sharpening a knife on an emery wheel. If you don't want notches in your blade, you keep it moving. Do almost all your cutting on the coarsest wheel you have. If you leave any flats on the preform, you are going to have them on the final piece—can't help it.

And finally, practice, practice, practice. Machines, like people, take some aquaintanceship before your really know what you can get out of them.

Lapis Lazuli or Sodalite?

from The Mountain Gem 11/01, via Blue Agate News, Rock Collector & Telephone City Crystal

Look for pyrite inclusions in lapis lazuli if you want to know whether you have sodalite, lapis, or imitation lapis.

- > Lapis Lazuli—Look for pyrite inclusions.
- > Sodalite—does not have pyrite inclusions.
- > Imitation Lapis—inclusions are golden flakes.

Lapis Lazuli is the gemstone with a rich blue color.

Lazurite is the mineral name of the gem and ornamental stone Lapis Lazuli. It has a hardness of 5 to $5\frac{1}{2}$, is a sodium aluminium silicate with some sulphur.

Most of the properties of lazurite are similar to those of sodalite, but the association of pyrite with lazurite determines the identification. Sodalite is a sodium aluminium silicate with chlorine. It is $5\frac{1}{2}$ to 6 in hardness, and the color is usually blue but may be white, grey, yellow, or red. It is associated with other feldpathoids, particularly nepheline.

Lapis requires fine sanding to prevent pyrite inclusions from protruding during polishing.

Sodalite polishes perfectly on felt with cerium oxide, after a fine job of sanding. Hydrochloric acid is good for testing lapis-lazuli. A drop of it on the blue stone creates an odor of hydrogen sulfide. On the white areas it usually effervesces because the white is usually calcite. This test will distinguish Lapis from Sodalite.

Show Time 2011

| May 28-29 | Fort Worth, TX | Fort Worth Gem & Mineral Society Will Rogers Memorial Center |
|----------------|------------------|--|
| July 7-10 | Syracuse, NY | AFMS/EFMLS Federation Show Gem & Mineral Society of Syracuse New York State Fairgrounds Center of Progress Bldg. cathypatterson@verizon.net; www.gmss.us |
| August 13-14 | Baton Rouge, LA | Baton Rouge Gem & Mineral Society Fraternal Order of Police |
| August 20-21 | Bossier City, LA | Ark-La-Tex Gem & Mineral Society Bossier City Civic Center |
| August 27-28 | Jasper, TX | Pine Country Gem & Mineral Society Events Center |
| September 3-4 | Arlington, TX | Arlington Gem & Mineral Society Arlington Convention Center |
| September 3-4 | Denison, TX | Texoma Rockhounds Denison Senior Center |
| October 8-9 | Temple, TX | Tri-City Gem & Mineral Society Mayborn Civic Center |
| October 13-15 | Mount Ida, AR | 25th Annual Quartz Crystal Digging Contest Montgomery County Fairgrounds Maureen Walther, Mt. Ida Ch. of Commerce 870 867-2723; www.mountidachamber.com director@mountidachamber.com |
| October 14-16 | Victoria, TX | Victoria Gem & Mineral Society Community Center, 2905 E. North St. |
| October 21-23 | Austin, TX | Austin Gem & Mineral Society Palmer Event Center |
| October 29-30 | Glen Rose, TX | Paleo Society of Austin Somervell Expo Center, Hwy. 67 |
| November 5-6 | Amarillo, TX | Golden Spread Gem & Mineral Society |
| | | Amarillo Civic Center, Exhibition Hall |
| November 11-13 | Humble, TX | Humble Civic Center, 8233 Will Clayton Pkwy. 5 miles east of Bush Intercontinental Airport 1 mile east of Hwy. 59; www.hgms.org Chris&Theresa Peek; <u>ladyt682@hotmail.com</u> |

| 2011 | 2011 June 2011 | | | | | | | |
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| Sun | Mon | Tue | Wed | Thu | Fri | Sat | | |
| | | | 1 7:30 Mineral Section 10-5 Shop Open | 2 7:30 Archaeology Group | 3 | 4 10–5 Shop Open 10–12 Youth Section | | |
| 5 | 6 | 7 7:30 Board Meeting | 8 7:30 Faceting Section 10-5 Shop Open | 9 | 10 | 11 10–5 Shop Open | | |
| 12 | 13 | 14 7:30 Show Committee | 15 10-5 Shop Open | 16 | 17 | 18 10–5 Shop Open 10-12 Youth Section 1:30 Beading Section | | |
| 19 | 20 1:00 Day Light Section 7:30 Lapidary Section | 21 7:30 Paleo Section | 22 10-5 Shop Open | 23 | 24 | 25 10–5 Shop Open | | |
| 26 | 27 | 28 7:30 General Meeting | 29 10-5 Shop Open | 30 | | | | |
| 2011 | 2011 July 2011 | | | | | | | |
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| 10 | 11 1:00 Day Light Section | 12 7:30 Show Committee | 13 7:30 Faceting Section 10-5 Shop Open | 14 | 15 | 16 10–5 Shop Open 10-12 Youth Section 1:30 Beading Section | | |
| 17 | 18 7:30 Lapidary Section | 19 7:30 Paleo Section | 20 10-5 Shop Open | 21 | 22 | 23 10–5 Shop Open | | |
| 24 31 | 25 | 26 7:30 General Meeting | 27 10-5 Shop Open | 28 | 29 | 30 10–5 Shop Open | | |

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