

Place: **Union Hall**
Meyers Street
Next to Campus Life
In Kettle Falls



Time: 7:00 PM
Third Tuesday
Each Month
(Jan.-Nov.)

The Panorama Prospector August 2008

Panorama Gem and Mineral Club August 19, 2008

Luci Bristow

Steve White opened the meeting at 7:05 PM.

September is our anniversary month. We will celebrate next meeting with anniversary cake provided by Margie Wilson. Steve Fox volunteered to bring the juice.

Sylvia Allen gave the treasurer's report.

Gloria and John Squires reported on the Gold Panning demonstration that was given at the Kettle Falls Library on August 15th. They had between 30 and 40 in attendance. Everyone got to keep the gold they had panned. They had a great time. Gloria stated that an article was in the Kettle Falls FOCUS talking about the demonstration.

John Squires talked about how gold nuggets are made and explained the difference between where they were formed in the earth. His talk was informative and interesting. Thank you, John.

The first raffle prize was drawn and Steve Fox was the lucky winner of the larger rock hammer. Congratulations Steve!

After the break, we watched a video on "Agates Close-up". Doug Moore of AFMS did a very nice job of presenting different kinds of agates.

The meeting was adjourned at 8:45 PM.

Addendum: by Joe Barreca

Luckily Luci came through with the minutes so I don't have to make them up. Also I don't need to make up the field trip stories, use all my own pictures or even research gold deposits because members Steve Fox, Diane Rose, Rex Barrans and John Squire have done all that for me. Susan Andrew contributed some cartoons. This is especially convenient since we have had more than twice the usual number of field trips this summer and the archives are brimming with pictures and stories.

Also, the Rocks-in-a-box trades have started to take off. I have run out of samplers and may be calling on you for more samples. Meanwhile the club is expecting collections in trade from Arkansas and New York.

Thanks also to the crew at our Northeast Washington Fair booth.

Horseshoe Mountain

By Steve Fox



[Left to right Bob, Scott and Steve]

The last Saturday of July and the day promised to be a relatively hot one. I packed up my truck and headed for Curlew and a rendezvous with some like-minded rockhounds to head up to Horseshoe Mountain and gather up some quartz crystals. The drive over Boulder pass is one of my favorite trips as there is so much to see. But as I crested the top of the pass I did not expect to see Rex and his trusty Sidekick off to the side of the road looking somewhat distressed. So I turned around and pulled off on a wide spot in the road where Rex was able to get his car parked. It was determined that he needed a new accelerator cable and that he would leave the car, and so we packed his and Scott's equipment into my truck and away we went. We got to Curlew and met up with three others (I have a lousy memory for names so I apologize for not getting everybody's name), and headed out to get some quartz.

When we got to the top of Horseshoe Mt., there was a car already there. So we knew we had company but we were pleasantly surprised to see Ray and Bob already there and digging over the side of the hill. At this point it is necessary to point

out that you need to be part mountain goat to get to where Bob and Ray were mining. This hillside is steep. They were doing it the hard way, using chisels and hammers to break off big chunks of rock that contained very nice quartz. Dynamite would have been much more practical and easier, but we can't do it that way. They did make things somewhat better with a rope that they ran down the mountain, although getting down was still easier than getting back up with all your gear and your rocks. At this spot I primarily dug into the dirt under a tree root and was rewarded with some very nice small crystals. Under this tree root is a beautiful cluster of quartz crystals that is going to take some very careful digging and chiseling to get out. It's still there if you want to get it.

As I made my way back to the truck, I did a little exploring and found that almost every large rock formation was loaded with quartz crystals. Several hard blows with my sledge hammer proved that it will take some hard work to get these crystals out.



[(Presumably) Jerry's leg in the Zalla Mine]

In the meantime, Rex and Jerry had gone over to the main mine. Jerry had brought a ladder to get into it. So after lunch, some of us went over to see how they were doing. Because I decided to move my truck over to the mine, I of course went up the wrong road about a hundred feet. Scott kept trying to tell me that I was on the wrong road and that I had missed the mine. Finally I paid attention to him and turned around and parked just below the mine. When we finally got there, Rex and Jerry were digging into the

tailings and coming up with some very good crystals.

Digging in the tailings turned out to be very good for all of us who stayed and scraped the dirt. Jerry went down in the hole and worked out some great crystals. Scott went wandering around and came back with a few nice specimens. It was getting near time to go and I wanted to check out a mine where we had stopped when we were coming up.

This is a relatively flat area because of all the bulldozing that has been done here. But there is a lot of material that you can explore if you take the time. As we came in Rex told us that off to our right there was some fluorite to be found. Two of us went over to check it out and I found about three or four specimens that had very small crystals in them, but were well worth the trouble.

It was time to go. We had an outstanding day of rockhounding. The weather was perfect and it did not get very hot. There were enough clouds to keep things cooled off without rain, but enough sun to cause our crystals to sparkle when we dug them up. The last stop was Sandy's Drive in near Kettle Falls for an ice cream cone. We did learn that Rex went back with a neighbor and retrieved his trusty Suzuki Sidekick that had decided to be more mule than trusty. It is presently being repaired.

Emerald Creek Garnets

By Diane Rose



All had a good time, and lots of hard work, for our first scheduled Bi-club Garnet dig at Emerald Creek.

The NIMC group: Everett and Erna Headrick, Jim and Ramona Peterson, Jim and Lu Rauch with grandchildren Lacy and Miles, Cindee Root with grandson Kado Pirone. Panorama Group: Larry and

Carol Price, Brian and Peggy Martell, Warren Buell and Mr. X (sorry I do not know his name) as well as Mike and I members of both clubs. We dug, sifted and washed lots of material along with 100 or so other people both days. Everyone found garnets and most got nearly a pound a day. Everett brought his wheel barrow so Mike dug and sifted while Everett and I washed and picked garnets. Miles and Lacy dug, Lu sifted and Jim picked garnets from the screen. Quite a team effort! I got pictures of most of the group except Mr. X eluded me while the camera was out.



On Wednesday, we all went on the mine tour with Bill Johnson and Rick Buchheit driving down just for the tour and Donni Moen took time off work to join the group. Dave Thom, plant manager, explained the mining process including a very strict permit process required to mine the area. They are required to restore the area after mining to better than it was before they mined the area with time restraints as well. A very informative presentation! Sorry if you were not able to join us.



Everyone except Larry and Carol stayed in the Forest Service campground where we sat around the campfire swatting mosquitoes that were unaffected by bug spray or Downy fabric sheets. We swapped rock stories and ate some-mores prepared by Miles, Lacy, and Kado as roasters of the marshmallows and Lu would add them to chocolate frosted graham crackers, some plain chocolate, second was mint and third peanut butter. Mint was my favorite. What a treat!

Northeast Washington Fair

By Joe Barreca



[Chuck Prentice, staffing our Fair Booth]

This was just a last-minute idea that I brought up at the club meeting. "Lets set up a booth at the Fair." Still eight people chipped in to make this event happen. The location turned out to be less than ideal. Still for just a spur-of-the-moment affair, we got a red ribbon and 89 out of 100 points. (I was hoping that by setting up late we would not be judged. No such luck.)

We'll have to talk this over, but with more tumbled rocks to give away and some preparation we could let a lot more people know we exist. Rex Barrans, Bill Allen, Jim Evans, Chuck Prentice, the Squires and Steve Fox all contributed time and materials. We shared the space with the Heritage Network.

Sept-Sat. 6, Horseshoe Mt. Meet at junction of Boulder Pass and Hwy 21, (Old Blue Cougar), 10 AM
Sept-Sat. 20, Sherman Creek, Garnets in schist, Barney's 9 AM.
Any car, hammer, chisel, shovel.

Gold Nugget Formation, The Whole Story

By John Squire

It has been taught for a long time that gold nuggets only form in association with quartz or calcite vein material in a very hot late stage magmatic fluid or hydrothermal environment. But recent evidence has shown that a good deal of the large nuggets and flakes of gold form instead from lower temperature hydrothermal action between the layers of shale, schist and slate type deposits. The metallic materials are gradually deposited between the lamina and strata and nuggets and flakes of gold result. Other precious metals are also deposited this way. The Roadside platinum group metals deposit available from me, (738-4801) is just such a deposit. Order a sample or small quantity and see what is deposited between the layers. It is beautiful gold and precious metals.

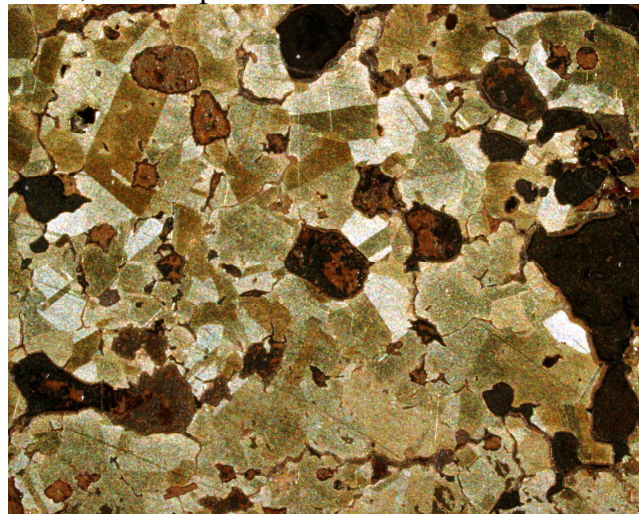


[8 kilogram gold nugget, Victoria Australia]

Typically quartz float, pieces of quartz laying around on the top of the ground in an area, are an indication of a nearby vein of quartz that could contain gold. Generally the quartz and gold do not come up together since the quartz has a much higher melting temperature. Rather the gold fills voids and pockets left after the quartz was deposited. Keep on the lookout for quartz float and you will likely find a vein. Metal detect in the area and you may be lucky enough to find a piece of gold bearing quartz or a nugget or two. But most of the gold associated with quartz is a very fine dust.

Most of the gold found by placer miners, the pickers, clinkers and clunkers have no evidence of origin in a quartz vein. This type of deposit is what they call secondary or supergene, forming at or near the surface. Deposits that form deep within the earth and at high temperatures are called primary or hypogene.

In recent times very much excellent crystalline gold has been found in various desert environments near the surface with metal detectors. These all have very sharp edges showing no wear by stream action or erosion deposition and were obviously formed in place near the surface. We even heard of one amazing specimen found in a very rich placer deposit in Alaska, a fossilized frog, where the entire frog was replaced with gold rather than the usual silica. The deposit was found to be very rich in ionic and sub-micron gold and is even now actively forming more nuggets. This is unseen gold that is in solution and easily transported in a moist, low temperature environment.



[Crystalline Structure of Gold/Silver nugget]

Scientists from the Commonwealth Scientific and Industrial Research Organization (CSIRO) did a bunch of testing on nuggets to try to determine their origin. Over 30 different large nuggets were selected from different places around Australia. These were sliced open and microscopic examination made of the actual crystalline structure of the gold and minerals present. Virtually all of the nuggets studied showed crystallization with strong twinning. The impurities plus twinning indicated that they were all formed deeper in the earth under hot conditions. The presence of a significant amount of silver also indicates a hot

origin deep in the earth's crust. You can read more about this at www.csiro.au/news/GoldNuggets.html.

This still leaves a mystery about all the gold nuggets that show no signs of wear and are found near the surface. So many nuggets must come from a different process. Again we are brought back to the mineralized foliated rocks like schist, slate and shale. Most of the time these type of deposits are ignored by the gold hunter. These types of deposits often do not outcrop like the harder quartz type deposits because they are softer and erode more quickly. Generally nuggets are sparse but when a large deposit erodes down many large nuggets can be found in the surface foot or two of the soil. Through erosion of the deposit the gold is concentrated at the surface layers. Some of these were discovered in the gold rush days and were called "seam diggin's". The Georgia Slide is a good example of a seam diggin' in California. This type of deposit can be found in any state in the USA or any country for that matter. Many nice nuggets have been dug right out of a weathered schist deposit still in situ, never moved.



[Mine near Georgia Slide AKA Growlersburg from the sound of huge nuggets in a gold pan]

This is where modern metal detecting helps. New detectors on the market today can detect a fairly small nugget near the surface. There are many of these hidden deposits just waiting to be discovered. Carry a good gold nugget detector with you whenever you are hiking and scan as you go. Eroded, burned schist

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of slate type deposits could be right under your feet with nuggets scattered about in the soil just below the surface.

A metal detector is about the only way to locate these excellent gold sources. Watch for red seams with high iron concentrations in heavily stained weathered rocks. The red is likely old weathered iron sulfides. Iron is a telltale sign and is said to be the "mother of gold".

Some deposits only produce small gold where others produce coarse or very large gold. If you find a one-ounce or larger nugget in an area, chances are good that there are more large nuggets like it, so do some good searching and get all the big ones.



[Garrett Graphic Target Imaging Metal Detector]

When schist or slate type deposits are eroded away the gold will concentrate better on flatter topography such as a hilltops, mesas or ridges. In steeper terrain the gold tends to migrate downhill into drainage systems and will find it's way into streams. Remember to watch for red iron mineralized schist wherever you go.

This opens up a whole new area for prospecting where you will be thinking and looking in areas that have been overlooked in the past. It can lead to great success so happy prospecting to you.

