

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

October 2005

Panorama Gem and Mineral Club Minutes for September 20, 2005

By Luci Bristow

The meeting was called to order at 7:00 PM. President Johnie asked Luci to say a few words -- she did -- and forgot part of the limerick she was reciting! HO HO! Our treasurer Larry gave a report.

President Johnie asked for ideas about our Christmas Party. Bill and Sylvia Allen will see if we can get the American West Bank basement for our party. We have had the party there for the last two years. We will eat at 6:00 PM -- so be there by 5:30 PM at the latest to help decorate. We will have a gift exchange, and perhaps an in-house auction.

Our next Gem and Mineral Show is tentatively set for April 7 and 8 at Fort Colville Grange. We will check to see when Spring Break occurs for the students.

We had an ugly rock contest, which was won by Joyce Dawson. What fun! Joyce also agreed to be the cookie person for our next meeting.

Rex and Diane discussed a field trip to Boulder Creek for quartz crystals and fluorite.

Jim Bachelor brought some garnets that he had gotten at Emerald Creek. They were great.

Johnie asked if Luci could compose a letter in regard to the Golden Age Pass. She will prepare one and have it at the next meeting for approval and discussion.

Panorama Gem and Mineral Club celebrated its 9th birthday at this meeting. Many thanks to Margie for getting the cake made. The club's logo on the cake was wonderful and delicious, too! And, as always, many thanks to Mabel for handling the introductions and being a great hostess for us.

Johnie and Rex stated that we had leftover frozen beef patties from our picnic with the Rock Rollers. A discussion followed and it was moved, seconded and passed that we donate the frozen patties to a local food bank.

Johnie's program was a talk on why some rocks fluoresces and others do not. Thanks Johnie for an informational program.

The meeting adjourned at 9:00 PM.

Geology and the Upper Columbia *Terroir*

(notes from a geology field trip written and guided by Bill Swartz, October 8th, 2005)

Early October is a glorious time. Autumn colors are at their prime. Geologists are not antagonistic to plants, but less, green foliage does make the physical landscape easier to visualize. It is harvest time, and time for grape pressing.



Bill Swartz at Neanderthal Vineyard

The baseline for wine production is a Mediterranean climate: warm, dry growing seasons and cool, moist dormant periods (the growing season is winter, in Central Chile and Southwest Australia). Northeast Washington frequently receives the necessary 2,000 hours of sunshine, necessary to mature grapes. Summer drought allows the viticulturist to control water quantity and timing, to achieve maximum sugar content. Winter temperatures seldom fall below -20°C , the point of damage to vines.

Three geological factors lend special character to the Upper Columbia Region, as a *terroir* for premium wines.

1. First or deepest, a wide variety of rock types as the parent material for the soils. The differing chemical balances produce site-specific flavors, across any

grape variety. Many classic wine regions are distinctive for their geology: limestone in Bordeaux, volcanic in Burgundy, granitic in Champagne.

2. Second in the soil, volcanic ash gives soil exceptional properties. The ash particles are pumice, the frozen froth of magma. The individual grains are fragments of glass bubbles. Countless, microscopic edges are sites for chemical reactions and holding moisture. Washington wine regions are unique for the tephra (usually tiny volcanic glass bubbles) content of their soils.
3. Third at the surface, the particular glacial history of the Upper Columbia Valley provides a unique situation. In the receding phase of continental glaciation (24,000- 16,000 years before present), a tongue of ice occupied the Valley. The top of the glacial tongue was about 600M elevation, at the latitude of Kettle Falls. Melt water coursed along the sides of the glacier, depositing silt, sand and gravel, in terraces. As the glacier melted, the ice vacated the center of the Valley. Without support, the terraces tilted, toward the axis. A gentle slope, across the terraces, allows cold air drainage in the Spring and Fall. A few days of freedom from frost, in the cool seasons, provide the sort of challenging conditions that develop distinctive flavor.



Amphibolite rock near Barney's Junction

(The rest of this article is from notes during the tour taken by Joe Barreca)

The amphibolite rock that shares the foundation of the (now underwater) Kettle Falls with quartzite is readily visible in the railroad cuts near the junction of US Hwy 395 and State Route 20 on the west side of the Kettle Falls bridge. It bears the marks of mountains sliding back and forth above it that now reside on both the east and west sides of the river. This layer is 4500

meters thick and slopes from here to a depth of 11 kilometers beneath Colville. Layers broken apart by the movement and ground into fine particles have annealed together and been kneaded into visible folds of dark and light material.

After a chilly morning, our group warmed itself at a fire and in the sunshine of the Cabral's Neanderthal vineyard. Over 20 varieties of grapes enjoy the volcanic ash and glacial silt that underlies them. The high clay content holds enough water that mature vines grow here without irrigation. The hardiest varieties are Lucy Kuhlman and Marechal Foch, French hybrids from the Alsace Lorraine region of France. Over a ton of grapes are harvested here annually, sold to home canners and wine makers or made into wine at the vineyard.

We ate lunch at the Barreca vineyard. A lighter soil makes for warmer conditions in the winter, but requires more irrigation. The biggest natural predators are flocks of birds traveling through on their way south. The entire crop is covered in bird netting. Wine varieties include Kuhlman and Foch, but also Pinot Noir, Baco Noir and Leon Millot. All are red French hybrids. White grapes including Reisling and Himrod, (a seedless table grape), also do well.



Bird netting on Barreca Vineyard

Traveling back up the river, we stopped to view the hundreds of feet of mudstone left on the bottom of glacial lakebeds and separated into layers where the grainy sand settled quickly each spring beneath finer layers of clay. Turbidity flows and other tales of fast and slow movement over time can be read in the cut banks.

Further up the Northport-Flat Creek Road we stopped to examine a shale slope of gneiss with blocks of limestone within it. These "knockers", named for the sound drill bits make

when hitting them in otherwise soft rock, are thought to have slid from a reef platform into the underwater basin. They contain protozoan fossils related to species found in McCloud river California and Japan.



China Bend Winery

The last stop was the China Bend Winery. The glacial till and river rock deposits on this bench lend distinctive flavors to wines from the vineyard. Bart Alexander, the owner, treated us to tastes of two varieties that he makes. Each is grown both in the Yakima Valley and at China Bend, near Northport. Each variety comes from genetically identical stock and the wine is made in exactly the same way. Yet each variety has a distinct flavor because of climate and *terroir*.



Both the China Bend Lemberger and the Chardonnay were crisper with more spice and a longer finish. We also tasted their famous Marechal Foch and then we were finished.

50 Years and Still Rock Solid

by Joseph Barreca

Bob and Luci Bristow are stalwart members of the Panorama Gem and Mineral Club. We would probably not exist without them. Luci's meeting minutes grace the front page each month and Bob's adventures are our closer. So it may be a surprise to some that this marriage got off to a rocky start. Luci first learned that Bob might have some long-term plans in mind while they were both crawling through a tight spot in a cave looking for pretty stones. He turned to her and said, "You know, my wife would have to like doing this sort of thing," (or words to that effect).



Well, 50 years later, on October 1st, the happy couple and a church load of their friends and family helped them celebrate the occasion of their marriage. There was plenty of food and lots of stories. They were the first couple to both



Bob's Yard Ornaments

belong to the electoral college at the same time. Luci hobnobbed with presidents and Bob blew up things for a

living. Well, you would have had to have been there to catch it all...

On top of that, the reception was held in their new – not quite finished – house. The front room featured dolomite marble slabs on the entryway that Bob cut from rocks found on the property. Luci once earned a living as a caterer, so the food was great. And the view of their little mountain valley was alive with fall colors. We wish them all the best for the next fifty years.

Topaz of Dismal Swamp

By Bob Bristow

Mineral collecting runs in my family and my wife's sister Carol and her husband John were no exception. John and Carol Matheson were well-known collectors in Boise, Idaho. Several years ago, Carol succumbed to lung cancer and this year John also died of cancer. This article is written in their remembrance. John led me on many trips in all directions from Boise and invited me on two or three Idaho Rock Club field trips. During one visit, our wives stayed in town while John and I headed west toward the Oregon border. From a road cut through tuff (volcanic ash), we collected small thundereggs with blue opal interior, Graveyard Point-type plume agate from a dry streamcourse, and a nice saginite agate from a rocky hillside. We then went into an area of hummocky mounds of tuff to look for petrified wood. Near the top of one of these mounds, I saw a number of small slivers of petrified wood. Upon digging down about a foot and a half, I uncovered the top of a good-sized tree. This tree was still standing where it had been growing when a volcanic eruption buried it in volcanic ash (tuff). I called John over and we dug down about another two feet to where there was a natural break. Luckily, John had a plank in the back of his pickup and we rolled the log up and onto the bed. Before leaving, I buried the now-exposed treetop and planned on returning to dig up a larger piece. Since John had always wanted to find a petrified log, I gave it to him. (Besides, I would never have found it if he had not taken me there.) When we got back to Boise, he rolled the log into a wheelbarrow and immediately took it next door to his rock-hunting buddy, Bob Kinkade, for show and tell.

Soon after Luci and I retired from Boeing, we spent several weeks with a travel trailer rock hunting. One stop was in Boise and I told John that I had always wanted to visit a place called Dismal Swamp. When I asked him if he knew how to get there, he said he not only knew how to get there but also had spent a week camping there with Carol. "Dismal Swamp" is not an apt name. It is located at about 8,000 feet altitude and is an area of small clear streams, big granite rocks and alpine timber with small grassy meadows; about as opposite from dismal as you can get! Figure 1

is a map to the Swamp and Figure 2 shows a typical topaz crystal. To get on the map, go south from Boise on I-84 to the turnoff to Mountain Home. Go northeast on US Hwy 20 toward the Anderson Ranch Reservoir. Go past the first turnoff to the reservoir to State Hwy 61. Take this road past the reservoir to Featherville and the start of the map.

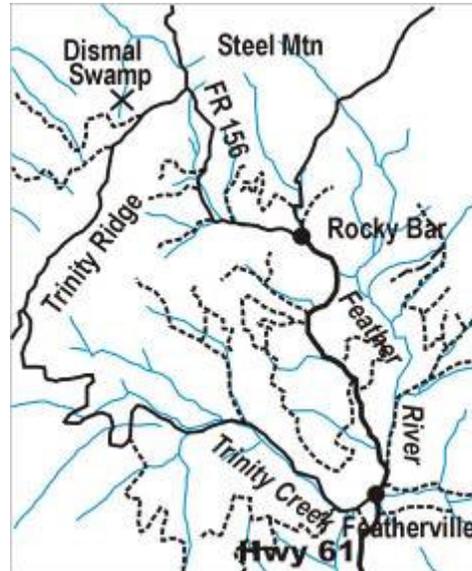


Figure 1. Map to Dismal Swamp

The next morning, we set out for Dismal Swamp with John's son-in-law, Cam Parsley. Cam and I dug some distance up one of the small streams in the "swamp." I found a topaz crystal but it was on the top of someone

else's tailings pile. I then put on my climbing boots and headed up into the granite boulders to look formiarolitic cavities. I found several that had been cleaned out. I then spotted a small quartz fragment on the ground. Looking carefully, I saw another small chip and then another up the hill. I was now in full hound dog pursuit-mode and after another 20 feet, there was the cavity – already dug out. I was disappointed, but I was certainly having fun! Then, on digging downhill from the cavity, I uncovered two bright, shiny 2-inch long smoky quartz crystals. With my find, I limped back to the stream. (I was limping because my left foot was killing me. When I got back to Boise that evening, Luci said, "Are you colorblind? That left boot is mine!")

Back down in the stream, there was a large boulder with a small pool of water in front. I slid my shovel in a hole under the rock and brought out some gravel. After several more scoops, I had enough gravel in the bucket for washing. I sloshed the gravel back and forth on a 1/8-inch screen and dumped it on a flat spot. I immediately pulled out two topaz crystals and a smoky quartz. The quartz was water-worn but

topaz is so hard that it seldom scratches. The topaz was clear and flawless. I got another quarter pail of gravel and found several more topaz crystals and smoky quartz.

John and Cam had been watching and soon Cam was digging in the hole and extracting his own topaz and smoky quartz. By now it was getting late and time to leave for Boise even though there was still gravel in the hole under the big rock. As we left, John announced that next weekend, he would return with Kinkade's pump, drain all the water out of that hole, and get all of that topaz. I heard John, but I didn't take him seriously. He was a great guy, but he loved to procrastinate!

The next day, Luci and I drove to Sun Valley with our travel trailer and met my brother at a prearranged location. I told him that I had found a place that he had to see. We went back to Dismal Swamp and cleaned out that hole, getting many topaz crystals.

After Luci and I returned from our trip, John's daughter Susan called to say that her dad and Bob Kinkade had, indeed, gone to Dismal Swamp to pump out the water under that big rock. She said John was somewhat riled and said, "Someone cleaned out that hole and I know it was that *** Bristow!" However, John himself never said a word to me.

The next time I visited Dismal Swamp was when a couple from our rock club, Bill and Sylvia Allen, wanted to go somewhere that had real gemstones. On our way, we spent the night in Boise and visited John. (Luci's sister had passed away several years before.) He said the Boise club had visited the Swamp a short time before and they had found very little. However, he and Bob Kinkade decided to go with us the next day for one last dig at the Swamp.

The next day, we set up camp beside the stream where I had found the good hole before. Now, the whole area was dug up. In the middle of the digs, I saw where there was a tree with three trunks that had come down the previous winter leaving a patch of untouched stream-bottom in the middle. I spent most of the afternoon, but all I could find

was sticky gray clay. John and Bob Kinkade concluded the Swamp was dug out and headed home. I went on up the creek, poking here and there for signs of crystals. About the time I was ready to give up, I tried digging under an old log. This looked barren too, but there were a few bits of stream gravel. I followed this gravel on under the log until it was several inches thick. This



Figure 2. Topaz from Dismal Swamp

layer of gravel was on a false bedrock and I knew topaz should have collected there. Digging a little further, I hit paydirt. Several topaz crystals in each screen. Since it was nearly dark,

I went back to camp and we all returned to the log the next

morning.

Bill and I took turns digging and screening. Each screen would then be dumped in front of either Sylvia or Luci. That night, we returned to Boise and took our booty to show John Matheson. He was very excited and said that one of the crystals recovered by Sylvia was the second best he had ever seen come out of the Swamp. I told John exactly where the log was that covered our bonanza in case he wanted to try his luck. A short time after I had returned home, he called to say that he had taken the entire Boise club to Dismal Swamp. Alas, the outing was a bust. I told him, "Of course it was a bust, you didn't ask to borrow my topaz crystal whistle. It works every time!"

As I write this, I am getting the urge to go find a willow tree, cut myself a whistle, and head back to Dismal Swamp!



Mineral Identification
Mineral/Mine Locations

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