

Minutes of the 09/20/05 West Side Board Meeting

Vice President Mike Messenger called the meeting to order at 7:35pm.

Kathy Earnst gave the Treasurer report.

- Kathy was able to have last month's service fee refunded to our account unfortunately she'll have to go to the bank every month to have the fee refunded. Kathy will report back next month on alternate to banks to move our checking account.

Correspondence

- Kathy received a letter from Central Washington University advertising their up coming annual Winterfest on 11/3/05. The Winterfest focuses on outdoor activities.

Old business:

- The question was asked if we could get the map of collecting sites in Washington from the 1980's reprinted. The DNR originally had the maps made and printed. Bob Pattie enquired about the possibility of re-issuing the maps but was told that the state was not interested in printing any more maps. Bob will contact the DNR about getting the rights to print the maps.

New business:

- Ed reported that the Sultan information center is looking for information they can provide on collecting sites in the area. Ed said he could put together a display of local material for the information center. He could also make a map showing the general location of the main collecting sites.
- Nominations for 2006 officers will be made at the meeting in Ellensburg on 11/5

Wagonmaster's:

- Ed reported that the Money Creek field trip was attended by about 25 people, half of which were kids. For about half the attendees, this was their first field trip experience. Everyone got plenty of material and went away happy.
- Ed's needs someone to share the responsibilities of leading the field trips. This could be one individual for all trip or a different person for each trip. This would be a great way to gain experience on organizing and leading premium field trips.
- Since the number of people attending the field trips is growing, Ed is concerned that our current insurance policy may not provide sufficient coverage. He plans to talk to our insurance agent and report back.
- The Salmon Creek trip (11/12) is the last trip of the season. There should be plenty of coprolites and carnelian.
- It's time to start thinking about field trips for next year.

Meeting adjourned,

Submitted by Glenn Morita, secretary pro-tem

Crystal Garden Quartz

Bob Deubrouck

Arlene and I recently returned from digging for quartz crystals for a couple of days southwest of Butte, Montana. Our daughter Jo and her husband were along...gad, how grown children can dig. Awesome. Anyway, the site is about 8,000 feet high on a good road and is set aside by the Butte Mineral and Gem Club for rockhounds. It embraces some 200 acres. There is no camping on the site, but there is drinking water and restrooms, and there are campgrounds nearby. Usage is by donation. Such beautiful country. We even had an elk wander around the edge of our camp. And we did find some quartz in the fairly easy digging decomposed granite. Will bring the crystals for the show and tell table along with articles detailing the location. A few of the crystals even had a touch of amethyst. I also picked up some miscellaneous quartz for anyone who tumbles for possible use at our club's spring rock show. To say the least this site has been discovered by others. There are many, many foxhole sized digs and, contrary to common sense, some trees were down as their roots had been undermined by diggers. We took some hikes up old mine trails, and some mines are still working in this highly mineralized area. A fun spot, consider it when in that neck of the woods.

from Rockhound Special 7/05

Geologists tackle landslide fire mystery Geochemical reactions blamed for bizarre blaze

Published online: 18 October 2005

Alexandre Witze

A year after firefighters extinguished a small wildfire in the southern California mountains, geologists are still struggling to understand how a landslide apparently sparked the blaze.

One possibility is that the landslide exposed a mix of minerals to the air, which promptly began oxidizing. This chemical reaction may have given off enough heat to trigger the fire, says Allen King, a geologist with the USDA Forest Service in Goleta, California.

But that explanation remains his top choice simply because the other alternatives - including geothermal heat, radioactivity, and an alien conspiracy - have all been ruled out. Hoping to elicit other insights, King described the mystery to geologists on Monday during a Geological Society of America meeting in Salt Lake City, Utah.

"It's a fascinating story," says forest service geologist Joseph Gurrieri.

The tale began sometime in the past several years, when a three-acre landslide occurred in the Dick Smith Wilderness north of Santa Barbara. Nobody noticed it at the time. But in August 2004, someone spotted a small fire burning in the area and reported it to authorities. Firefighters put it out. Then they tried to extinguish the heat coming from the ground. They kept trying.

Several days later, they called King, the geologist responsible for that region of forest. They told him they couldn't get the dirt to cool down. "I really didn't know if they were just pulling my leg," he says.

Heated debate

King and other geologists visited the site. Someone stuck a thermometer into the ground, and it rocketed to over 200 °C, the highest it could register. Later, more sophisticated measurements revealed temperatures reaching a maximum of just over 300 °C at a depth of 3.5 metres. The ground was slightly cooler at deeper depths, suggesting the heat source was concentrated near the surface.

Firefighters shot an infrared movie of the area, revealing blotches of heat glowing on the landslide. Gas sampling detected carbon dioxide, carbon monoxide, and various sulphur-containing gases. There was a little helium, suggesting that the source probably didn't originate in a deep volcanic chamber. King's originally favored theory - that the heat was coming from geothermal sources - was soon ruled out.

And so King is left with the chemical-reaction idea. The rocks are mostly shale, with bits of pyrite crystals and carbonaceous material. "Our hypothesis is when that comes in contact with oxygen, it generates heat," says King.

Similar reactions can sometimes trigger spontaneous fires inside mines that are being worked. But King says he could not find any examples of such a thing happening in a natural setting.

A meeting of forest service geologists two weeks ago wasn't able to come up with a better idea. So at the Salt Lake convention, King stood hopefully by his poster, waiting for someone to help explain the landslide that started a forest fire.

If you have an answer to King's dilemma, write to us at news@nature.com

How Tiny Crystals Decorate Iris Agate

According to Mr. R. Lipkin, scientists can now explain how the elegant swirls form in iris agate. Iris agate, a type of quartz whose iridescent patterns sparkle with color, has long been valued as a semi-precious stone. Two scientists, Peter J. Heaney, a geologist at Princeton University, and Andrew M. Davis, a geological chemist at the University of Chicago, show that concentric shells of fine and coarse crystals alternate to create the agate's light diffracting "iris" bands.

Agate formed when mineral rich water flows through volcanic rock, consists of millions of micrometer-sized crystals. Those crystals, the researchers observed, come in different sizes and contain varying degrees of impurities caused by changes in the water's mineral concentrations.

Observing agate slices with transmission electron microscopy and ion mass spectroscopy, the two scientists found that the size of the tiny crystals and the degree of impurities change cyclically, forming the iris band's crystal pattern. When scrutinized agate slices reveal a self-similar pattern that repeats itself at various level of magnification (sounds like fractals).

"Agates show us one way that nature make repetitive patterns," Heaney says. "Self-similarity is fascinating because it's largely unexplained. Understanding this may shed light on how scientists can mimic those textures in new materials."

from Rocky Trails, 12/97 via Rock Rollers 8/05 and others

How Plumes Get Into Agate

By Ruby Lingelbach

Agates that are formed in cracks and crevices of the host rock many times have plumes, such as those found at Graveyard Point on the Idaho/Oregon border. There have been some rockhounds hunting there who found seams of "pre-agate". Or cracks in rocks that had plumes grown on the sides of the crack extending toward the middle. These protrusions were built by chalcedony, but most has a coating of calcite or some other mineral. If the silica solution had been sufficient to fill the crack or had been undisturbed until the space was filled, these would have created the beautiful, sought after Graveyard Point Plume agate, with the plumes colored by whatever mineral had precipitated first.

From The Tumbler 3/95 via Rock Rollers 8/05

