

08/05/06 combined board meeting minutes

The WSMC regular meeting was held in Ellensburg on August 5th. Attendance was very small, as only 9 people showed up for the meeting, thus we couldn't make any business decisions at the meeting.

Ed Thomas opened the meeting and the meeting was primarily a discussion of a variety of topics.

Bob Pattie says the postage costs are more than the printing of the newsletter for the Council. He asked that all members that have email please pass their email addresses on for emailing the newsletter, instead of utilizing mail-outs.

We talked a bit about getting more younger people involved in club activities and promote the hobby to new people. Ed Lehman has been doing a heck of a job in promoting rock collecting in the schools. We need more people doing the same thing in their communities. We are seeing more clubs dying out due to lack of new members and lack of promoting the hobby.

We need to post a slate of candidates for officers at the joint meeting in Ellensburg, during November. We need 2 trustees, a Secretary, a V.P. candidate for each side and a 2nd V.P. from the East side.

A short discussion was held on the location of the eastside case. It is located at the North Idaho Mineral Club per Diane Rose.

Bob Pattie brought up the suggestion that we still need to almost have something of common interest scheduled for the combined meetings. Either something controversial for folks to bitch about or problem solve. Possibly even some kind of program. As I recall, Vi and George had done something about arranging programs for the joint meetings in the past, which helped the turn out. The last program I recall involved a slide presentation and discussion on the Ice-Age floods. This was a really good program and might be interesting to have an update regarding this.

Ed related to us that he is getting more reports of Ed Lehman asking for help, HE NEEDS A REST.

Steve Townsend remarked that there are a few field trips in the Ellensburg area.

Ed Brandstoettner from Spokane stated that their club has been increasing in membership and they have a new meeting room where they can have some of their equipment and classes. He also stated that the Yakima club isn't having many field trips most of their effort is in putting on the show.

It was reported that Mike's trip to Mt. Higgins for rhodonite was well attended.

There was a comment about Red Top where they are leveling the ground and a sign that was in the area about a fee for parking. There is no fee for parking. It was suggested that someone get more information on Red Top and what is happening at this site.

Kathy gave the Treasurers report.

It was mentioned that there is a land swap between DNR and Boise Cascade, I didn't catch what land was involved. Also some land in the First Creek is up for sale.

We finished with the reminder that a lot of areas are closed because of the fire danger.

Submitted by Bob Pattie and Ed Thomas

Dirty old mine has rich seam of drugs

EVERY cloud has a silver lining. A contaminated lake designated hazardous is turning out to be a source of novel chemicals that could help fight migraines and cancer.

"It's exciting to know that something toxic and dangerous might contain something of value," says Andrea Stierle, a chemist at the University of Montana in Butte.

Berkeley Pit Lake, also in Butte, filled with groundwater after the copper mine closed in 1982. Dissolved metal compounds such as iron pyrites give the lake a pH of 2.5 that makes it impossible for most aquatic life to survive. In 1995 Stierle discovered novel forms of fungi and bacteria in the lake. More recently her team has found a strain of the pithomyces fungi producing a compound that binds to a receptor that causes migraines and could block headaches, while a strain of penicillium fungi makes a different compound that inhibits the growth of lung cancer cells.

This week they reveal that a novel compound called berkelic acid from another new strain of penicillium fungus reduces the rate of ovarian cancer cell growth by 50 per cent (Journal of Organic Chemistry, vol 71, p 5357).

The Midas Bug Bacterial Alchemy Of Gold

Science Daily online edition, 08/02/06



Bacteria play an important role in the formation of gold nuggets in Australia according to new research published this month in the journal Science.

The paper highlights the findings of a Cooperative Research Centre for Landscape Environments and Mineral Exploration (CRC LEME) project by CSIRO researcher, Dr Frank Reith.

Dr Reith's research has shown that bacteria play a significant role in the formation of secondary gold grains.

His study of gold grains from the Tomakin Park and Hit or Miss gold mines in southern New South Wales and northern Queensland, respectively, led to a series of discoveries, which showed that specific bacteria present on these gold grains precipitate gold from solution.

"The origin of secondary gold grains is a controversial topic that is widely debated within the scientific community," Dr Reith said.

"There are those who believe the grains are purely detrital, while others believe they form by chemical accretion.

"A third theory suggest that microbial processes are involved in gold grain formation which may be responsible for one of the largest gold deposits in the world, the Witwatersrand deposit in South Africa."

Applying molecular biology techniques, Dr Reith discovered a living biofilm on the surface of gold grains collected. DNA profiling of this biofilm identified 30 bacterial species with populations unique to the gold grains when compared to the surrounding soils.

One species was identified on all of the DNA-positive gold grains from both locations. DNA sequence analysis of this species identified it as the bacterium *Ralstonia metallidurans*.

"The next step was to see if we could observe gold precipitation in the presence of a culture of this bacteria," Dr Reith said.

"By placing a culture of the *R. metallidurans* in the presence of dissolved gold, which is highly toxic to microorganisms, I observed active gold precipitation.

"A unique attribute of *R. metallidurans* is that it is able to survive in concentrations of gold that would kill most other micro-organisms."

This research has significance for the mineral exploration industry – as current models of gold formation do not include a biological mechanism.

"There may be new opportunities for the bio-processing of gold ores now that we have discovered bacteria that precipitates gold out of solution," Dr Reith said.

New cutting oil recipe

Hi Rocky, etal,

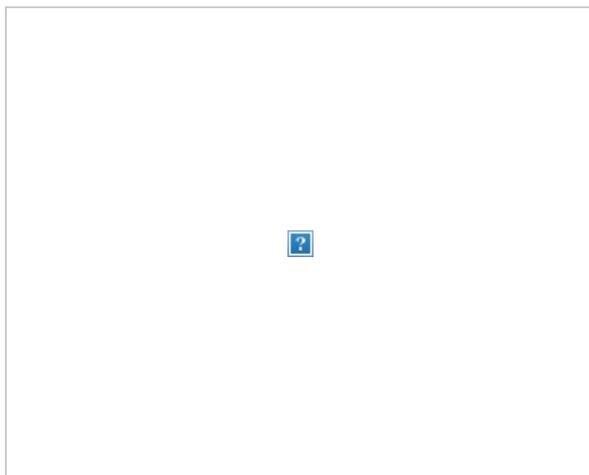
I may have told you about this before. I am now using a mixture of 50% stove oil (Diesel #1) and 50% filtered fryer oil in the rock saw. The attached picture shows the settling of the amount of paraffin in it at the pictured temperature.

At 26 degree F there is about twice as much settling. However it still works in the saw at that temperature.

At 6 degree F it is all cloudy, which I doubt anyone would be cutting rock in anyway.

I get the used fryer oil from the local Dairy Queen for free. I then filter it through one shopping bag, ala Lloyd Bellman (Lloyd used two bags for filtering saw oil).

Raymond Burns, my son-in-law, says that a person can use the filtered fryer oil mixed with diesel for use in trucks and tractors but the power drops off a bit and re-jetting is necessary in any mixture heavier than 40% fryer oil. Personally, I think I would go through the rest of the conversion process of the fryer oil before using it as a fuel in vehicles. The process is quite involved and utilizes lye and a condensed battery acid compounds to drop out all of the paraffin.



Brad Baughman uses straight diesel fuel in his 24" saw but there are a lot of issues around that when using it indoors for cutting, including de-fatting of the skin and inhaling hydrocarbon mists/vapors.

Someone else mentioned using salvaged anti-freeze from the wrecking yard for his cutting oil. I also have a problem around the components of that too.

In discussing, with Ray, making up a more economical cutting oil for use in rock saws, we thought the 50/50 mix with filtered fryer oil would handle the issue of vapors and causticity. It seems to work real well for me.

The stove oil was around \$2.68 a gallon when I bought it. The fryer oil was free. The time was also free. I figure this batch cost about \$1.34 a gallon for the cutting oil mixture. It beats the heck out of, Almag, Pella and the commercial hydraulic fluids that run well over \$40 for a 5 gallon pail (\$8 gallon)!

Maybe this information could be shared with the club members too?

From Stone Age News, 03/06

Heat treating recipes

by Ed Thomas

We, Emory Coons (Burns, OR) and I have been cooking/heat-treating the China Hollow (Biggs) materials that I handle for the purpose of Flint-Knapping to make the jaspers and agate from this location easier to chip. We have found out it also enhances the colors and patterns in the jaspers. Jim Miller (a Flint-Knapper of Continental renown) has also been doing a lot of work in this area of heat-treating lapidary material for knapping purposes.

1. The jaspers from our location seem to treat well at temperatures of 625 degree F.
2. The agate from here (Dolphite) will treat at temperatures from 350 – 450 degree F. depending upon characteristics towards opacity of the raw material. The more translucent the material the lower the cooking temp.
3. Don't cook at the higher temps with large hunks. Instead slow-cook at lower temps for longer periods. Pieces/slabs of 5/8" or less are easier to cook without disastrous results.
4. Pre-cooking at 350 – 550 degree F. for larger pieces at longer time periods seems to work well for the jaspers. Many times the yellows will tend towards pink/red tones after cooking. After the cook, a person can then go ahead and do their slabbing and just heat-treat the better choice cuts in a burn-out oven at the higher temps.

5. Jim feels that pre-cooking the agate and jasper materials at lower temps of around 200 – 300 degree F, prior to slabbing takes a lot of wear away from the diamond material used in cutting slabs (blades). I agree with this as well.

The subject of heat-treating of agates and jaspers is an ongoing study undertaken by many Flint-Knappers.

Jim Miller has a CD Book available that includes much of his findings on the subject. It is called “Flint-Knappers Guide to Rock” and can be purchased directly from Jim Miller at goldnpoint@comcast.net He lives in the Bothell, WA area. Last I heard his CD’s were selling at \$15.95 ea. Drop him a note if interested in one of his CD Books.

The Marysville Rock and gem Club has one of these CD’s, as well as the NW Fed. Of Min. Soc.