Place: **Arden**
Community Club
Hall Rd
Arden, WA

THE PANORAMA GEM & MINERAL CLUB

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

The Panorama Prospector

March 2011

Minutes for February 2011

By Ginger Pitman

Bill Allen ran our show meeting at 6PM. He has things well in hand, if not it will all be worked out.

Our meeting had one visitor and 47 members, goodies for next meeting are coming from Ginger/Johnie, Steve Fox and Rita Cordrey for drinks.

Sylvia gave the treasure's report; the scholarship fund looks good for this year. Johnie asked Steve to present at Kettle Falls, Colville and Chewelah need volunteers. The applications will soon go to the schools, to be completed by May 2nd.

The winners for the rock hammer/bracelet raffle were drawn; Sherry Bamberger won the rock hammer and Leslie King won the bracelet.

Jim/Rita Langevin donated a book to the club it was decided to raffle it, when we have sold 40 one dollar tickets we will draw the winner. The title is: Gem and Lapidary Materials for Cutters, Collectors and Jewelers.

Johnie gave some information on the "Third Annual World Rock Tumbling Championship" (Really they say there is such a thing.) We'll get the info to you if you are interested.

Joe asked for some help with the news letter, articles of trips/adventures; how to; histories and etc are all good.

Joe will get the posters printed for people to hand out, and since the Spokane show is later we will sent out flyers to nearby clubs.

Bill gave a progress report on the show. We still need cases filled and Bev gave applications for people who want to fill display cases in the Spokane show. Since ours is first it should be easy to transfer our displays to their show.

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Diggin' At U-Dig

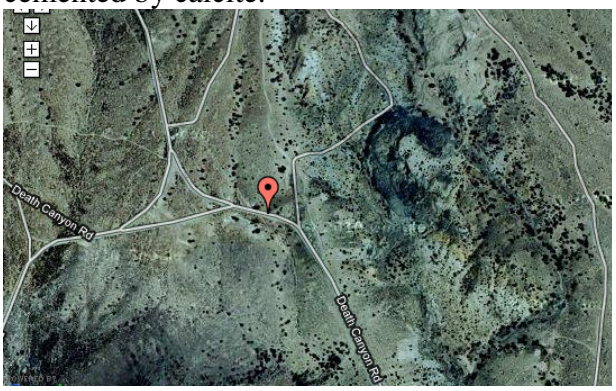
By Bruce Hurley

Most fossil collectors love to find trilobites but usually hate the difficulty of finding a whole one. It turns out there is a very good reason why most trilobite fossils are "partials." Partial fossils usually represent shell material molted from a living trilobite during growth stages, while complete fossils preserve the remains of a dead animal itself. So, rocks containing mostly fossil parts usually represent ancient marine environments which were healthy for trilobites, while rocks rich in complete fossils represent less hospitable conditions. Fortunately for trilobites, there appear to have been many more of the good environments for most of their 300-million-year span of existence.

One area of the Southwest is a much better environment for modern fossil collectors than it was for trilobites. That area is the House Range, a massive stack of Paleozoic sedimentary rocks several thousand feet thick, west of Delta, Utah. Near the base of the range there are several formations of dark shale, all of which contain fossil trilobites, a high percentage of which are complete. These shales host a number of well-known trilobite collecting localities in the range,

but the most famous is the Antelope Springs area. Chances are, if you have ever seen a finely-detailed black trilobite perched on the surface of a dark gray shale, it came from Antelope Springs.

There are many areas to collect fossils successfully around Antelope Springs, all of which are outcrops of "limy shale" of the Middle Cambrian Wheeler Formation. This rock is gray to black and composed primarily of clay, cemented by calcite.



Abundant fine carbon material within the clay matrix gives these rocks their dark color. Small amounts of pyrite and gypsum are also locally present. Apparently, the environment in which this shale was deposited had poor water circulation and at times became toxic to bottom life, which also included small brachiopods. Most of the fossils in this shale have had their external shells partially replaced by silica. This hard material is responsible for both preserving fine details and creating a much more durable fossil. Antelope Springs was once a great place to pick up good fossils on weathered shale chips lying around on the ground. Those days are long gone, however, and most good specimens are found these days by excavating slabs of shale and splitting the rock along its bedding plane. The shale splits rather easily, but in most outcrops getting out slabs of fresh rock from the trilobite-bearing zones is another matter. And that is where the fee collecting site U-Dig Fossils comes in handy.

U-Dig operates their quarry as an active specimen mining site, and continually excavates access to the best trilobite-bearing zones. This provides virtually anyone willing to pay the fee with the opportunity to find high-quality trilobites, with modest effort, in a short period of time. Currently, the U-Dig website (http://www.u-digfossils.com/) lists adult fees ranging from $28 for two hours to $70 for a full day of collecting. Children's fees are less. Use of a hammer to split the shale and a bucket to carry specimens comes with the fee. The quarry staff also provides assistance on how to collect the fossils and the best areas in which to find them. Collectors are allowed to bring their own collecting tools, and are responsible for their own gloves, safety glasses and packing materials.

Collecting goes fast at U-Dig, with little overburden to move and most exposed layers containing trilobites. Nearly everyone finds several complete trilobites within two hours, and within a half-day are certain to have found at least a couple of large specimens. Many of the best-preserved trilobites require little cleaning, but some very good partially-exposed specimens may be worked out with a sharp dental pick and a Dremel tool steel wire brush. Once you have freed one of these ancient arthropods from its long stay inside the shale, you better understand why they are still as eagerly sought and studied as when first found over a hundred years ago.

The House Range itself is a scenic part of the Basin and Range geographic province, with good places for dry camping, shade from junipers and pinion pines, and great desert vistas. The U-Dig site is at 6550 feet elevation, so the collecting season is limited by weather from to late March to October. Because of the high elevation, the sun is very intense, and sunscreen, sunglasses, a good hat and lots of water are necessities in summer, when days usually top 90 degrees. In addition to fossils, there are also several famous mineral collecting localities in this general area, including Topaz Mountain locality and the Dugway geode fields. But that is another tank of gas for another day.

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Chuck Prentice will be leading a class on how to do cabbing; the first one is Mar 5th at the club shop, starting at 1pm. He will do 4 classes, classes are free and there will be no charges for upkeep on the shop equipment for those taking the class.

Steve gave a shop report; Brian brought the new 18 inch saw blade. All the equipment is in good shape ready to use.

Sherry had some rocks that did not sell on ebay; it was decided to use them for the silent auction at the show and then re-evaluate the auction rocks.

Steve Fox gave some suggestions for field trips, any that you know of will be considered. Pow Wow club does Saddle Mt in April and anyone can join them by becoming a member on site, or Saddle Mt. is always free. Memorial Day week end is the Tri –Federation field trips in Oregon. Emerald Creek for garnets opens Memorial Day week-end and hopefully 3 gold panning trips will be scheduled. There is a pay to dig for Ellensburg Blue. The committee will try to do Sat, Sun and week day trips so all can join in. The schedule will be out soon.

Sylvia gave a talk on where/ what can be found in the Badlands area of South Dakota with a film on the beautiful Badlands. There is an agate allotment of 20,000 acres set aside from the state. She had pictures of the ground littered with agates; this is also the area for the elusive Fairburn agates. There are 3 hand outs on the rock hounding opportunities in the Black Hills/ Badlands, let Sylvia know if you need one. There were lots of places that she still could cover; we thank her for the informative program.

End

Notes from the Prez..

It's almost "Show Time"!!! It's just about three weeks away and I hope you have March 31 marked on the calendar so that you can be at the Grange Hall about 8:00 AM to help with set up. It would be good if the snow is gone by then, I had 6-7" of new stuff on the ground this morning. Also start planning your displays for the show cases, we still have a few cases available.

On Saturday March 5th the first class on cab making was held and there were 10 students and Chuck Prentice (instructor). Everything was going well until the motor on the grinding unit started to smoke, so everything slowed down and we didn't get to finish what we started. Hopefully we can get the motor replaced before next Sat. (3-12-2011). We will meet again about noon to 1:00 PM and continue from there, if you want to get started on cab making come and join us.

The scholarship applications have been delivered to the schools and will be picked up around the first of May.

See you at the next meeting, remember that the show meeting starts at 6:00.

Johnie

A Class on Cabochons

By Joe Barreca

[Chuck Prentice teaching the Cab Class]

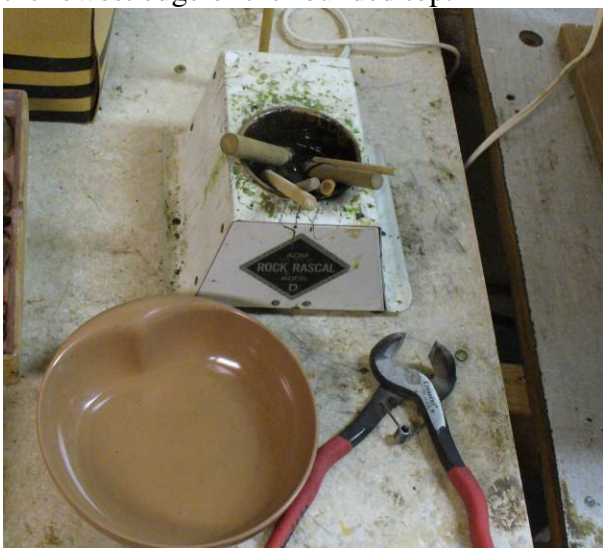
It's not as simple as it looks. That is the main thing I took away from the cab class. There is a trick to everything. Chuck brought some slabs of Madagascar Jasper for students to use. Johnie Pitman helped a great deal and sent the chart on "True Grit" for this article. Bev Bockman was not there but sent some helpful hints. Bill Sebright sent some pictures. Scott Jackson had the shop in tip top shape. So with all this help it all went smoothly, right? Not exactly, as Johnie points out in the last article. Still it was a very helpful class. I'll try to break it down into the classic "ten easy steps". The truth is. It takes tools, patience and practice. The students would agree with that but also that it is all worth it.

1. The first step is to pick a pretty spot on the stone and mark out the outline of the cab you want to make on the back of the stone with a template, usually elliptical, and a felt tip pen or brass marker. Some fancy tools allow you to mark both sides identically. That would be nice since the pretty spot is usually seen from the front.

2. The next step is to cut out the shape with a rock trim saw. You won't be able to get it exactly, but don't fear, that will come next. Also don't fear cutting yourself badly, you would feel the saw blade before it draws blood.

3. Bring the rough cab over to a grinding wheel. Chuck brought one that has a little metal shelf set at about 8º. Put the stone face down on the shelf it you have it, so the cut slants toward the future face of the cab. The trick here is to rotate the stone against the wheel with each pass. This reduces the risk of chips and flat spots. (Johnie prefers a 5º to 7º bevel. He cautions you to also gently take the sharp edge off the bottom to reduce the chance of chipping it and give the future mounting a sharp curve to grip.)

4. The two jigs shown here are used to draw a line around the sides of the stone that will be the lowest edge of the rounded top.



5. Now you are ready to attach the stone to a dop stick with hot wax. It is best to lay the stone on the flat spot at the back of the wax pot and let it warm up quite a bit before applying wax. Then you need to form a little platform of wax on the stick by pressing the waxy end on the table and letting it set up a little. With some fresh wax on that platform, press the stick down on the back of the rock. The bowl shown here has some water for you to cool your fingers so you can press the hot wax into a uniform crown on the back of the stone, but not reaching the edges. Let it set up a couple of minutes before working with it. Don't worry, you can pop the rock off after freezing it or even cooling it in a snow bank.

6. A lot of people mark a round spot in the center of the top of the stone at this point. In the next steps you will be grinding it round and you will want to grind that center spot last.

7. Now you are ready for the real grind. This will normally take place on an 80 grit diamond wheel. The thing about diamond wheels is that it is easy to make flat spots with them unless you are very gentle. Never press the stone into the wheel, let it just touch it and keep the stone moving across the face of the wheel and in a rotating motion. You are going to do the majority of the grinding on this rough wheel.

True Grit

The following list of good polishing methods for specific stones was provided by Bill Robinett, of the Houston Gem and Mineral Society. He says it is an old list, origin unknown, but it is still good:

Agate	Cerium oxide on canvas	Jade	Linde A on leather
Apatite	Linde A on leather	Jadeite	Linde A on leather
Alabaster	Tin Oxide on leather	Jasper	Cerium oxide on canvas
Amazonite	Tin Oxide on leather	Labradorite	Tin Oxide on leather
Amber	Tin Oxide on leather	Lapis Luzuli	Tin Oxide on leather
Aventurine	Tin Oxide on leather	Malachite	Tin Oxide on leather
Bloodstone	Linde A on leather	Moonstone	Tin Oxide on leather
Chiastolite	Linde A on leather	Nephrite	Tin Oxide on leather
Cinnabar	Linde A on leather	Obsidian	Tin Oxide on leather
Chrysocolla	Cerium oxide on canvas	Opal	Cerium oxide on canvas
Coral	Tin Oxide on leather	Peridote	Linde A on leather
Datolite	Tin Oxide on leather	Rhodochrosite	Tin Oxide on leather
Epidote	Tin Oxide on leather	Rhodonite	Cerium oxide on canvas
Feldspar	Tin Oxide on leather	Thulite	Cerium oxide on canvas
Fluorite	Tin Oxide on leather	Ruby, Sapphire	Diamond on wood
Garnet	Linde A on leather	Serpentine	Linde A on leather
Glass	Cerium oxide on canvas	Sodalite	Cerium oxide on canvas
Gypsum	Tin Oxide on leather	Spinel	Linde A on felt
Hematite	Cerium oxide on canvas	Topaz	Linde A on cork
Hickoryite	Linde A on leather	Turquoise	Tin Oxide on leather
Howelite	Cerium oxide on canvas	Varicite	Tin Oxide on leather

Linde A is "lindsite" rare earth oxide a glass polishing agent containing cerium and other rare earth oxides in the proportion in which they occur naturally.

8. So with the stone close to its final shape, we need to work it down through wheels with finer grits: 180, 360, 600, 1200, 3000. There are finer grits available on disks: 8000, 14000, 50,000. You can move through these fairly quickly since the hard work has been done. A key trick to this part is to rinse the stone between each wheel or disk and never rinse in the waste water from the grinding wheels. A terrible thing can happen if you don't. You can pick up a larger grit and embed it in the next smaller grit wheel where it will scratch every successive stone ground there.

9. The last polish is from the buffing wheel. It uses aluminum oxide grit suggested to be 1 micron or less. You mix the grit with water to form a paste and put a little of that on the wheel. You can buy this grit at up to 5 microns for less money, but 1 micron is the standard. The True Grit chart suggests different kinds of grits and buffers, leather or canvas. The harder the stone the harder the buffer wheel.

10. The last step is to show off your stone. You certainly earned a little recognition and a treasure to keep or pass on to someone special.