

# GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB

JULY 2009

## *the Prez Sez ...*

I certainly hope that our members have had a happy and safe summer so far. Several of our members have taken classes at William Holland School of Lapidary and Ron Gibbs has taught his first classes there in both digital photography and advanced cabochons.

I taught a basic cabochon class there and it was an enjoyable week for me. I took a case of Ron Gibbs' fantastic new book on agates and jaspers and they were sold out in a few days. If you do not have your copy yet, Ron has a special price for club members.

Sara Lee Boyce has been there most of the summer teaching opals and I know from seeing her there that she is loving every day that she gets to teach there.

Our treasurer, Gale is going to an SFMS sponsored week at Wildacres in Little Switzerland to take a course in silver smithing. If you are not aware of the wide variety of courses that both of these schools offer, you should check out their websites. Something for just about everyone. I can tell you that these schools offer the most BANG for your dollars in this economy that

you can get. For about three hundred dollars a week, you get a place to sleep, good food, great mingling with folks that like what we do and great classes. Not only is it a great vacation alternative but one of the most sharing and fun weeks that one could have.

Mary Fisher's junior rockhound program continues to grow. She had back to back sessions at her last meeting due to demand from the kids. Mary often gives the kids rocks and minerals and I ask that our members bring any spare crystals, chunks of obsidian, just about any specimen that would thrill a new rock kid to the next meeting. In reaching out to youth and the community, our club will have a table again at the WINGS home schooling convention again this year on Aug. 21st. We give kids rocks at this event too and sure could use some specimens to donate. We have gained new members from our presence there last year and hopefully the awareness of our club will grow again this year.

I held a cabochon class in the club clubhouse on Sat. July 11th with four members in attendance. Hopefully, Murray Simon will be able

to return to a regular schedule of teaching soon. At this time, I am able to come into town to teach on Saturdays or Sundays.

Whenever I have an open day, Ron Gibbs has been kind enough to send an e-mail blast to members titled CABOCHON CLASS OPPORTUNITY. When you receive one of these e-mails and are interested in coming to a class, it is important that you reply to MY e-mail and do not hit the reply to RON.

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Here is how the process works for my class. As soon as I get a response from at least three folks that they can come on a particular day, those three have first choice. We have four machines and four is the max unless two folks want to share a machine. If you are a total beginner, it does not matter that others there may have had more lessons. The instruction is individual and there is no problem with you being able to fit in. Our students are producing some beautiful stones.

Our club really needs a field trip chairman in my opinion as we have had members expressing interest in going on digs. If you would like to start an active field trip program again, please let us hear from you.

There are upcoming gem and mineral shows in Franklin first then Spruce Pine. If you have not been to either of these shows, both are good places to learn about the wide array of rocks, minerals and gemstones as well as buy and come home with some treasures.

If members are interested in going and want to save on gas, perhaps some car pooling could be arranged. It is an easy day trip to either location.

Mary Fisher is offering a trip for her juniors on August 1st to the Spruce Pine show.

Our Matthews Alive geode cutting fundraiser is not far off and WE NEED VOLUNTEERS. See any officer or director to get signed up to help any hours that you can. Duties include everything from standing front like and selling the geodes, to sawing them to washing them, taking the money and wrapping them. PLEASE step forward and help your club. It really is a most fun weekend and each time that a person gets to see what is inside their geode is total excitement.

I also want to thank Ken Anderson for attending the recent SFMS meeting on behalf of our club. Ken has also been very helpful in writing new safety guidelines for our clubhouse which the board will review soon.

I hope to see you at the next meeting. Come and bring a friend to The Nature Museum. Easy to find, easy parking and well lit.

*Jack King, President, Charlotte Gem and Mineral Club.*



**HAPPY  
4TH OF JULY**

# Charlotte Junior Rockhounds

*(No Regular Meetings for July or August)*

Field Trip:  
Saturday, August 1

Grassy Creek Gem Show  
Spruce Pine, NC

Meet at the Fire Station  
(Where the BBQ is sold)  
at 10:00 AM  
Saturday Morning

Directions: From I-40 take Exit 86.  
Follow NC 221 N to 226N to Spruce Pine.  
Parkway Fire Department on left on Hwy 226.

If you get lost, or are running late  
Contact Mary Fisher  
704-564-1594

# Charlotte Gem & Mineral Club

## *Monthly Meeting*

**Thursday, July 16, 2009** Time: **7:00 pm**

Location: Charlotte Nature Museum  
1658 Sterling Rd  
Charlotte, NC 28209

***Cash and Treasure Episode #33 Lightning Ridge Black Opal  
Kristen Dunn goes in exploration of Black Opal to the Opal fields  
of Australia. From collecting to appraisal, and final cutting.  
presented by Murray Simon***

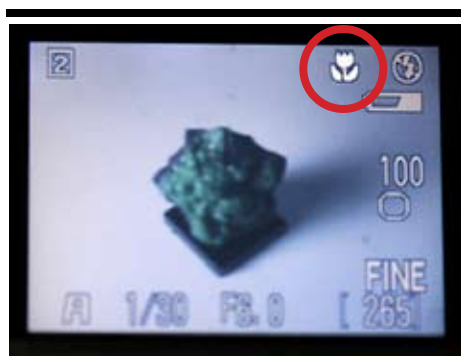
# Using a Digital Camera to Photograph slabs, cabs, gemstones, minerals and jewelry - Part II *by ron gibbs*



Macro Mode fig. 1

Over the next couple of installments I will discuss what I believe are the most important features to obtain when you purchase a digital camera for Lapidary related close-up work on the WEB or in print.

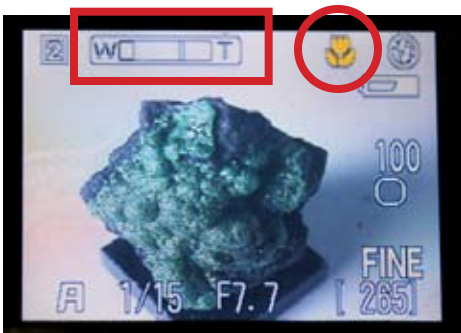
In Part I, I ended with the general rule of “fill the frame” with the image. Digital images cannot easily be enlarged above their original size without image detail loss. Thus high on the feature list for jewelry, cabochons, gemstones, slabs, etc. is MACRO FOCUS on the camera. To achieve highly detailed images you must fill the frame with the material being photographed and that means focusing close to the subject matter.



Macro Mode - but “zoom” in wrong position and therefore NO focus possible

Today most digital cameras have a “macro” mode and it is often designated as a small “flower icon” (fig. 1) somewhere on one of the many controls. Typically the focal distance runs from about 1 to 3 inches out to about 8-10 inches. It may vary depending on the “zoom” setting of the lens.

When the lens is set to it’s wide angle setting, it will typically be in the 1-3” range and when set to one of a telephoto setting it’s likely to be in the 6-10 inch range. (Important NOTE! - many times the macro setting will only focus throughout a narrow band of the zooming range.)



Macro Mode - “zoom” now in acceptable range - macro will now focus properly. The flower has changed from white to yellow in this image. fig. 2

This means once the macro function is turned on, the zoom must be adjusted to a certain narrow range where close focus is possible. Some manufacturers show the flower icon in the view finder as you try to focus and when the proper focus can be achieved, the flower changes color. Look in the camera manual to see if this is true for your camera or you will NOT be able to achieve focus no matter how hard you try. (See figure 2.)

So, item one on our purchase list is a macro capability in the lens. I prefer a lens that will focus successfully at about 3” out to 8” and fill most of the frame with the photographed object. If your camera focuses at the 1 to 2” range only, it may be hard to get lighting into the subject as there is little space between it and the lens.

This brings me to the next point on focus. Most of today digital cameras can be divided into two “AUTO-FOCUS” categories, passive auto and active auto.

Active focus systems use a secondary beam of light, infra red or in rare cases sound to achieve the focus. They measure the time it takes to send the beam out to the object and then return to the camera sensor. The time is proportional to the distance and they set the focus accordingly. These type of systems have a few problems build-in. First if there is something



Typical Self-Timer Icon

transparent between the camera and the object (like a clear window) the camera will tend to focus on the window pane and not the object. In the case of IR (infra red) sensors they can be fooled by heated objects in the scene or by objects that absorb large amounts of infra red radiation.

The Passive focus systems use software in the camera and examine the image on the ccd (or equivalent sensor) in the camera and determine focus by the contrast in the image. Sharp lines are sharp because they have high contrast. Thus the software determines the best spot to focus on by the area in the image with the best (read that as highest) contrast. Unfortunately this is not always the part of an object you may want in focus. Take of example a piece of jewelry, a rounded cabochon in the center may not have enough to contrast to force the auto-focus to find it if there is sharp wire work or edges around the rear surface of the jewelry piece. Hence the cab may always appear out of focus while the wire work is sharp. Continuous tone, similar hues, and flat objects without shading may confuse this type of focusing system,.

Another nice feature in a digital close-up camera is "MANUAL FOCUS". It is possible to work around the lack of manual focus, but it's really handy if you are doing large quantities of macro work.

Also the next topic goes hand-in-hand with focus, and that is tripping the shutter (taking the picture). In order to get crisp, sharp images the camera must be maintained rock steady. This means the use of a tripod, either table top or floor standing for all of our shooting. Buy a sturdy tripod, not a little thin, flimsy one.

When a camera is mounted on a tripod via the tripod mounting screw in the base of the camera, it is best to actually take the exposure by using either the self-timer on the camera (virtually all of today's digital cameras have them). OR if available, buy a remote shutter release to fire the camera. Many of the current digital camera's have either IR remote controls or manual remote with a wire tether. Either will work. If they are not available then use the self-timer to actually take the image.

At first glance images shot hand-holding or on the tripod using your finger will look fine in the camera view-finder or in most camera LCD display screens. When the image is finally transferred to the computer to look at it full size it will likely look far less sharp when blown up if taken hand-held or with your finger on the shutter release (even on the tripod). The three images to the right show the result of blowing up part of the cabochon shot using the three methods.

Fig 3. - Image hand held and enlarged - very large loss of detail in the photo. Fig 4. the camera on a tripod but the shutter pressed by a finger. There is still some degree of blur in the blown up image. The last in the sequence, Fig, 5, was captured using the self-timer and the detail is sharp.



*Cabochon Photograph*



*Fig. 3*



*Fig. 4*



*Fig. 5*

The list has now grown to begin the selection of a digital camera with features most likely to aid in close-up photography.

- 1.) Macro -focus to boost the size of the image and apply the largest number of pixels possible.
- 2.) Manual control of focus to select the specific part of the image to maintain in sharp focus.
- 3.) Self-timer and/or remote shutter release to use to take the picture to avoid camera shake and maintain a crisp image. (Although not part of the camera - a good tripod is also a necessity for a sharp image.)

Next month I will discuss the exposure part of taking a proper image, the need for f-stop (aperture) control, the best shooting mode, and how the camera determines the exposure, and why it can be wrong.

*(Continued info on auto-focus)  
-some work arounds -*

If the camera you have does not have MANUAL focus there are a couple of potential work-arounds you may try in order to achieve the control of focus you need. The first one can be implemented easily if you have a remote release mechanism.

Most of the current digital cameras run through the same general procedure just before they actually expose the image. They re-check the exposure if in auto-mode, and they RESET the FOCUS (in auto focus) just before they actually take the picture. This auto-RESETTING OF FOCUS is what may change the desired focus point. Most of the

current crop of digital cameras can be made to auto-focus and HOLD the focus by HALFWAY depressing the shutter release button and holding it in that halfway position.

While holding the button in the half way position you can move the object very slightly toward or away from the camera to achieve the desired focus. It's not easy, but it can be done. Once the object is moved to the correct position, the shutter is fully depressed finishing the exposure.

It is a little difficult using the LCD plate to determine the focus, but it can be done with practice on most cameras while the shutter is half-depressed. You have to look at the image in the LCD while manipulating the object and continuing to hold the shutter in the half-depressed position.

Another, *sometimes* successful trick is to introduce a "crosshair" drawing in the image at the point where you desire focus. A bright white piece of paper with a dark cross on it (crosshair) (Figs. 6-8) will sometimes make the camera see it as the highest contrast area and focus at this point. If there is room the crosshair can remain in the image and be removed in post processing with Photoshop or an equivalent.

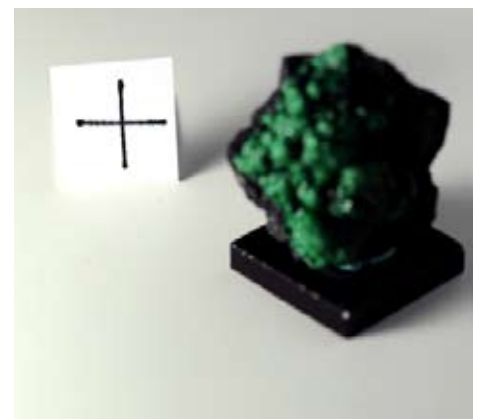
Once the camera focuses on the crosshair it can also be removed, halfway depress the shutter, and while holding the shutter at the half-depressed point, check the focus to be certain the camera focused properly on the crosshair, and then remove the small



*Fig.6 - too far front*



*Fig.7 - about right!*



*Fig.8 - too far behind*

crosshair, and finish depressing to take the image. Both techniques are much easier with a remote shutter release.

## *A note from our Librarian - Pat Walker*

The club has a lending library - the idea is that you check out books and borrow them to read at leisure, but eventually there is a need to return them! The following books have been missing, some for a year and a couple for nearly 2 years. We want to find where they are!

- 1.) *Wirewrapping by the Long's Roy and Mel*
- 2.) *Vol I. Ideas with Square Wire Dorthy and Jim Kelley*
- 3.) *Vol II. Advanced Ideas with Square Wire Dorthy and Jim Kelley*
- 4.) *Death of a Goldmine Clyde C. Pittman*
- 5.) *Wyoming Jade Russel MacFall*

If anyone has these books or knows where they are please let Pat Walker know. Thanks for your support!

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### ***How To Stabilize And Color Enhance Soft Turquoise***

*Edited from an article by the late Ed Ashton, former DGMS member; via Rock Chips 10/2007 and The Pineywoods Rooter 12/2008 - abstracted from the Hus-ton Gem & Mineral Club Gazette*

How many of us rockhounds (in copper-related mineral areas) have picked up chalky, soft, very light blue (or depth blue) turquoise and have thrown it back down because we did not know how to work it and end up with a piece of jewelry?

I'm sure the answer will be that most of us have experienced this many times. With the use of Opticon (a material used in sealing fractures), we can stabilize and harden this material and use it to our great satisfaction. [Opticon can be purchased at most rock shops.]

#### *Stabilizing Procedure*

**1.** Select the clean materials and sort the sizes up to an inch thick. Place the material in a container (casserole with cover or a crockpot with a glass cover), and be sure to cover the material with Opticon 224 without the hardener. Cut large pieces with Crystal Cut (not oil) so

that the maximum thickness is 1/4 inch.

**2.** Set the casserole aside. Look at the color enhancement, as it will be seen on most materials immediately. The color that was hidden now appears because the chalky appearance is gone. In two days full enhancement should show up. Since the Opticon must soak into the material, the soaking time increases with greater thickness. When the material is 1/4 inch thick, it will take at least six weeks for the Opticon to penetrate to the center of the material. However, 3/4 inch material will take at least 12 weeks for the Opticon to penetrate to the center of the material.

**3.** After the required amount of soaking (6-12 or even 16 weeks), place the covered casserole in the oven. Set the temperature at 250 degrees F for one hour (if using a crockpot, 1 1/2 hours). Then turn off the oven and leave the casserole in

the oven overnight. This lets the temperature slowly return to 90 degrees F.

**4.** Lay a piece of waxed paper on your work bench. (Don't use foil wrap). Drain the Opticon off the material and wipe it clean. Save the Opticon in the casserole for future use. Take a clean baby food jar and put two tablespoons of the Opticon into the jar. Then cover the casserole and remove it from your work area so that it will not become contaminated by the hardener. This Opticon can be reused again if it doesn't accidentally get any hardener in it.

**5.** Check the directions on the can and add twice as much polymer (catalyst) than is called for to the Opticon in the baby food jar. Coat or dip the material in the catalyzed Opticon, and lay it out on waxed paper. Do not let the pieces touch or they will harden together.

**6.** Now comes the patience time. Let the material cure for at least two months, and you will have stabilized turquoise that works well.

I use Dico Company plexi-glass buffing stick compound, and it works well and easily. It takes only a few seconds to get a high polish on this stabilized material. The material will also be very tough and about 4.5 to 5.6 hardness. If this material is properly soaked and cured, it is almost impossible to tell that it is stabilized. It takes a blow pipe and an experienced person to tell. The material heat destructs differently. I have personally taught a lot of people how to use this procedure, and they have been both successful and happy with the results, GOOD LUCK.

***Welcome to the second annual  
CENTRAL NORTH CAROLINA KNAP-IN and  
PRIMITIVE SKILLS RENDEZVOUS  
September 18,19, and 20, 2009  
Friday & Saturday 9am to 6pm  
Sunday 9am to 4pm***

Hosted by the Flintknappers and Bowyers of North Carolina  
Location: 2049 McCray Road  
Burlington, NC 27217

Besides for the making of stone arrowheads, spear points, and knives there will be demonstrations in primitive bow making and arrow making, including fletching and hafting. There will be demos in brain tanning hides from start to finish. How to make fire with a bow drill as well as flint and steel. How to make cordage and a plant walk to identify the plants that can be used in this area. And atlatl making and a practice throwing area for you to try this ancient form of spear throwing. We are hoping that there will also be demonstrations in pottery making and blacksmithing. This year we will also be raffling off a bow that will be made during the weekend.

Primitive vendors are welcome. This year a fee of \$ 5.00 per day will be charged for vendors and campers. The fee for visitors is \$ 2.00 per car per day. Bus loads are welcome. There is plenty of room for parking and camping. No running water or electricity on site, but there will be concessions and porta-johns. And a limited supply of firewood for the campers. Come on out and step into the past!

For further info contact: Dick Bernier email: rebsrl@wildblue.net

For further updates see Primitive Archer web site at;

HYPERLINK "<http://www.primitivearcher.com/smf/index.php?board=8.0>" \t "\_blank" <http://www.primitivearcher.com/smf/index.php?board=8.0>

***Directions:***

From I-40/85 Exit 150 go north on Jimmy Kerry Rd., SR 1928, to Hwy 70. Here you can go straight across or left on Hwy 70 to get to Hwy 49. Take Hwy 49 north about 5 miles, (past the Martin Marietta quarries on the left), until you get to McCray Road, SR 1754. There is a Shell station on the corner. Turn left and then left again on Dennis Trail, SR 1729. Follow the signs to the knapin. The knap-in is held on a private grass airfield.

***Upcoming Shows:***

***July 22-25--FRANKLIN, NORTH CAROLINA:*** 44th annual show, "Macon County Gemboree"; Gem & Mineral Society of Franklin; Macon County Community Bldg., US Hwy. 441S; Wed. 10-6, Thu. 10-6, Fri. 10-6, Sat. 10-6; adults \$2, children 12 and under free; minerals, beads, handcrafted jewelry, rough and cut stones, lapidary equipment, demonstrations, door prizes, gold and silver jewelry, findings, jewelry repairs and mounting; contact Linda Harbuck, 425 Porter St., Franklin, NC 28734, (800) 336-7829; e-mail: linda@franklin-chamber.com;

***July 30-August 2, 2009, NC Mineral and Gem Festival Spruce Pine, NC*** Welcome to the North Carolina Mineral, Gem & Jewelry Festival website! Since the early 1950's Spruce Pine, North Carolina has been the host of the Festival and welcomed visitors from around the world to shop for beautiful jewelry, gemstones, minerals, beads, crystals, fossils and more!

***Sept. 11-13--WINSTON-SALEM, NORTH CAROLINA:*** 38th annual show; Forsyth Gem & Mineral Club; Coliseum Annex Bldg., Dixie Classic Fairgrounds, Gate #9 from 27th St.; Fri. 10-7, Sat. 10-7, Sun. 12-5; contact W. A. Marion, 1163 Bear Creek Church Rd., Mocksville, NC 27028; e-mail: MarionA1@yadtel.net