

# THE CAPITAL ROCKHOUNDER



Publication of the Capital District Mineral Club, Inc.  
Chartered by the Education Department of the State of New York  
P.O. Box 12814, Albany, New York 12212-2814

## June 2009

### June Meeting

There will be no meeting in June. There will be a banquet instead. See June Banquet section for details.

### May Program Review

Bill Cotrofeld gave his program on caving which he originally gave in the late '50's when he first became a member of our club. He added a few things to show us the difference between the modern equipment and the old equipment, but for the most part, he kept with his speech of the 50s. He put up a display on the back table for us to look at after the speech. This was a great program and was enjoyed by all.

### Minutes from May Club Meeting 2009 Capital District Mineral Club Minutes Thursday May 7, 2009 *Curtis Breuer, Secretary*

Met at the New York State Museum at 7:00, forty-two members were in attendance. Meeting was called to order at 7:30 by President Anne Woods. We met our new member Mark Perez. We started off by selling raffle tickets, followed by Bruce Murray introducing our speaker Bill Cotrofeld. He gave us a presentation similar to that of a presentation that he gave to the club as a teenager in the mid 1950's about caving in the Heldeberg Mountains and the Schoharie Valley. The talk was very interesting and contained several slides of hand-drawn pictures as well as slides on safety equipment and gear. Secretary's Report was given by Curtis Breuer; Richard Hartnett motioned to accept the minutes, Bob Stitham seconded. Treasurer's Report was given by Bob Stitham; Balance on Hand April 1st: \$8116.06, Raffle: \$48.00, Interest: \$1.14, Dues: \$20.00, there were no disbursements leaving us with a Balance on Hand May 1st: \$8185.47, Joe Van Camp motioned to accept the report, Bob Ballard seconded. Banquet Committee: Bob Stitham announced that our annual spring auction will be at the Gateway Diner on June 4, with a social time starting at 6:30. Field Trip Committee: Went over previous fieldtrips and future trips. New Business: EFTA raffle was announced by Anne. Barbara Gearhardt motioned a close to the meeting,

everyone seconded.

### May-June 2009 Field Trips

**May 23. Batchellerville Quarry.** Richard Hartnett. Batchellerville, NY. Meet at General Store/ Deli Batchellerville at 11am. 20 people limit. Digging tools, claw hook and hoes, hammers not needed, black flies will be there (head net), bug spray. Minerals to be found (aquamarine beryl, rose quartz, mica (muscovite, biotite), smokey quartz, feldspar, betaphite (radioactive), etc. Trip Leader Richard Hartnett 518-439-7243. Must receive reply from field trip leader before you are considered signed up. Release provided by Richard Hartnett must be signed prior to collecting. Must enter collecting site with trip leader.

**May 30. Schoharie Quarries.** Robert Stitham. Led by Paul Griggs, we will go to Howes Cave Quarry and perhaps another one the same day. Meeting place is 10am at the Howes Cave Historical Museum at the Howes Cave Quarry in Schoharie, NY. Please contact the field trip leader Robert Stitham at gumbyr13@nycap.rr.com or call 755-2255 until you get a person. Paul Griggs will then lead us throughout the quarry to collect fossils. Please bring hardhats, gloves, hiking boots, safety goggles, as well as buckets, bug spray, hammers, suntan lotion, chisels, etc. You will be collecting many different kinds of fossils. Sometimes travertine (flowstone calcite) is available in small amounts. Due to the dual leaders on this trip, it is imperative that you listen to both leaders and stay with the group. Those that don't will be asked to leave the trip. Note: if you encounter roadblocks in the road near the quarry, you are one road off.

**May 30-31. Penn Dixie Quarry (CANCELLED)**

**June 13. Fox Creek (CANCELLED)**

**June 20. Fox Creek Gallupville Trip.** Bob Ballard. Meet at 10am at Gallupville, NY in park behind the town garage. Will be collecting fossils in river gravel, might

need heavy tools, otherwise walking around collecting small rocks with fossils and flint. Will go to tentaculites site and several other sites as well. no facilities, bug spray. Trip leader Bob Ballard 377-8656 rballad@nycap.rr.com Must receive reply from field trip leader before you are considered signed up.

**June 27-28. Gilsum Rock Swap.** on your own. 45th Annual Show will be held June 27-28, 2009. RAIN OR SHINE Hours: 8:00 a.m. - 6:00 p.m. Saturday/ 8:00 a.m. - 4:00 p.m. Sunday. Location: Gilsum Elementary School and Community Center, 640 Route 10 in Gilsum, NH (just 10 minutes from Keene). Show contact: Robert Mitchell E-mail: gilsumrocks@gmail.com Phone: 603-357-9636 More than 70 dealers and swappers with gems, jewelry and minerals available for sale or trade. Pancake Breakfast 8:00 - 12:00; Snack Bar 12:00 - 6:00 (Hot Dogs, Hamburgers, Drinks, etc.); Saturday: Annual Ham & Bean Dinner 5:00 and 6:15 p.m. Homemade beans and pies!; Sunday: Chicken Barbeque 12:00 - 2:00. Bring something to swap! Every table is required to have a swap area this year (even the dealers)! Some of our members have tables here. A lot of us go every year like clockwork. Give it a try. PDF Brochure for Gilsum 2009 available for download on club website.

Field Trip Report - Barrus Ledge - 5-9-09  
Lithia, Town of Goshen, Massachusetts  
The day began with sprinkles and misting of rain and overcast conditions. The drive to Goshen was, nevertheless, interesting with what would normally have been beautiful woodlands from Dalton to Goshen, Massachusetts was marred by extensive tree damage from winter ice storms.

Thirteen (13) hardy souls came despite the weather, which improved as the day wore on giving us good collecting conditions Except For The Damn Black Flies! Neither Cutter nor Deep Woods Off worked for me. They just advertised: "Human to be savaged!"

The thirteen individuals on the trip included: Jo-anna Michalek, Kevin Finn, Catherine Chiachiarretta, Bill Williams, Julie, Neil, Matthew, and Daniel Stuart, Kyle and Kevin Baskin, Bob Ballard, Greg Shields, and Richard Hartnett (Leader).

We met at the Old Creamery Grocery in Cummington, MA, a good meeting place replete with gas pumps, clean restroom, yummy baked goods, hot coffee, and a gourmet deli and table seating. We left at 11:30 am for the Barrus Farm (one seasoned member arrived at 11:30 am; luckily for him we hadn't left at 11:15 am as

planned).

John Foulkes, the owner's cousin, met us as well as some curious llamas (this is a llama and horse farm) and as usual John graciously led us down to the collecting sites and stayed with us. He also offered us restroom facilities in the farmhouse.

Everyone found some specimens of Tourmaline: Indicolite (blue/purple), Elbaite (green), and/or Schorl (black) and Catherine and Bill found a couple of pieces of Lepidolite and lots of Tourmaline. A couple of possible Goshenite pieces were found as well. Jo-anna found some really nice specimens of Tourmaline. I didn't see everyone's haul.

We left the farm area collecting sites and went to the Spodumene location and everyone found crystals, some greenish, not quite Hiddenite, though.

At about 3:30 pm everyone headed back to New York except Bob Ballard, Gregg Shields, Kevin Finn, and Richard Hartnett as we had an early dinner at a local eatery with John Foulkes as my guest. The company was delightful and made a nice end to the collecting day.

This locality has great potential for future field trips, however, new rules have been set in place by the owner – no rock saws and no over-zealous pounding down of large boulders.

*Richard Hartnett*

## June Banquet

The Banquet will be at the Gateway Diner on June 4th. We will be ordering off the menu, so please take the time to read the menu on the internet and decide what you want now. The festivities will start at 6:30pm, with dinner at 7:30pm. If you want to attend this banquet, please call Anne at 322-7932 or Bob at 755-2255. If you leave a message, please indicate the amount of people in your party so we can provide enough seating. Please sign up no later than June 1 so we can provide the Gateway will the proper amount of seating necessary. Mike Hawkins will be paying for half of your dinner, however since we are not yet clear on when you will get your money back, please bring enough money to pay for your entire bill. Also, an alcohol will not be included in the bill that is halved. We plan on having goodies at the table and a door prize or two, but don't hold us to it. If you have a door prize that you would like to donate, please contact Anne at 322-7932.

Gateway Diner  
899 Central Ave, Albany, NY 12206  
(518) 482-7557  
www.gatewaydiner.com

## June Live Auction

Mark Kilmer and another CDMC member will be entertaining us by being our live auctioneers. Please bring 3 items per person attending the Banquet. There will be an 80-20 split on profits. 80% goes to the member, and 20% goes to the club. Please bring items that would be of interest to a rockhound: a mineral or fossil specimen, a flat of items that will go as one bid, old maps, a rock crusher, rock related books, jewelry, etc. Please note that bids that start low tend to do better in the bidding war. Please identify the specimens as best you can with name and location. Bidding will occur in increments of one dollar (\$1) with a starting bid of one dollar (\$1).

### Kid Dig Collecting

Now that collecting season is here please remember our Kids Dig at the mineral show in Albany. We could always use some different materials, the more colorful and brighter the better. It's better to have 10, 20 or more of the same mineral rather than 1 or 2 of many different minerals. Keep this in mind when you are out collecting. The rocks you pick up for the kids may not be something that you would keep for yourself, but think about it for kids just starting out. Grab a handful of something you think a kid might find interesting each time you are out collecting. Thanks. *Bob Hartig*

The Puzzle of the Herkimer Diamond  
Herkimer Diamonds are one of Upstate New York's most interesting and famous mineral oddities. Actually quartz crystals, they earned their nickname for their amazing clarity. "Herks" are also unique in that they are double-terminated, that is to say, they come to a point at both ends of the crystal. This suggests that they grow in such a way that they aren't in contact with any surface (i.e. the host rock). However, no one has yet been able to determine how they were formed. Many theories exist, most involving some type of hydraulic (fluid-based) or hydrothermal (fluid and heat-based) process.

Currently, the most accepted theory was posited by Dr. Steven Chamberlain of Syracuse University, retired, now working for the New York State Mineral Institute, Albany.

At the 15th Rochester Mineralogical Symposium in 1988, he presented his abstract entitled "On the Origin of Herkimer Diamonds". His hypothesis involves a confluence of chemistry and stratigraphy, set 500,000,000 years ago in the Upper Cambrian Period. At this time, sediments that would later become the Little Falls Dolostone were being deposited on

the floor of a shallow, warm sea. Silica, the building block of quartz, was present in the form of sand. Silica is not usually soluble in water to any appreciable extent. However, various organic molecules (i.e. hydrocarbons) already in solution in the water, acted as both catalysts and binders. These molecules allowed the water to not only strip silica molecules from sand grains but to also hold them in solution.

Dr. Chamberlain additionally considers it likely that bacteria played a key role in forming these complexes of organic material and silica ions. This means that the process is not simply hydrothermal, but also biogenic (basically, facilitated by a lifeform). As the sediment layers were buried, some of this solution became trapped in pores and vugs (also known as pockets) in the fledgling dolostone. As much as 7,000 meters of additional sediments were laid down over the new rock formation, causing the temperatures to rise to as much as 200 degrees Celsius. These temperatures, coupled with the pressure of 7 kilometers of overburden, rendered the silica /hydrocarbon complexes somewhat unstable. Silica molecules began to slowly precipitate out of solution and form crystals. As the solution chemistry evolved over time, it continued to provide a slow source of silica to the growing crystals. Tiny amounts of the solution were occasionally trapped in the forming crystals, providing some insight into how the chemistry of the solution changed over time. These inclusions have been found to contain gases like methane and ethane, liquids like brine and petroleum, and even chips of solid hydrocarbon (anthraxolite). Each of these materials represents a different phase in the "life cycle" of the solution. Because the crystals formed in pockets in the host rock, they had the space to form terminations at both ends. Additionally, the distinct clarity of the Herkimer Diamond can be chalked up to the extremely slow heating and burial beneath the prehistoric seafloor, which kept the solution free of many impurities. Other minerals, such as calcite and pyrite, were precipitated from the solution concurrent with or after the formation of the quartz crystals. Anthraxolite crystals and other hydrocarbon residues found in vugs with Herkimer Diamonds are the last remnants of the former solution.

Dr. Chamberlain's theory also provides a good answer to the persisting question of how a 300-million-year-old crystal wound up in the middle of a 500-million-year-old rock. The solution containing the building blocks of the Herkimer diamonds was trapped during the Upper Cambrian when the rock was formed, but the crystals themselves didn't precipitate out of the solution until much later, possibly as late as the Carboniferous Period.

Dr. Chamberlain's work, later published in *Rocks and Minerals* (V64: P454), may not definitely answer the question of the Herkimer Diamond's mysterious origin, but it certainly provides food for thought. It also opens the door to asking what other minerals may be of biogenic origins. This idea won't be explored any further here, however, a future article is in process with regards to this interesting topic.

*Eric J. Orlowski*

*-GARNET GAZETTE May 2009 Volume 40, No. 5, p. 3-4.*

Capital District Mineral Club  
P.O. Box 12814  
Albany, NY 12212-2814

**Where is this and who  
are all the people?  
And why are you  
wearing dress shoes?  
Please send answers  
to the club website.  
Thanks.**



Officers:

President	Anne Woods	518-322-7932
Vice Pres	Gerry Pratt	518-392-0453
Secretary	Curtis Breuer	518-338-6266
Treasurer	Robert Stitham	518-755-2255

Newsletter Staff:

Anne Woods schmanie@albanyrockclub.com  
Don Kauffman - articles  
Richard Hartnett - articles  
Robert Stitham - general

Website:

<http://www.albanyrockclub.com>

All submissions to the newsletter must be in my hand before the 18th of any given month, or they will be used in the next subsequent newsletter.

The purpose of our club is:

- To promote and encourage the study of mineralogy and other applied sciences.
- To cooperate with educational and scientific institutions in order to bring about a better and more general understanding of earth sciences.
- To provide a program with suitable speakers for scheduled meetings.
- To sponsor, direct, and assist in the planning of excursions to mineral localities and other places of geological interest.
- To cooperate with organizations whose purposes are similar to those stated in the foregoing items.

*The Capital Rockhounder* and the Capital District Mineral Club are not responsible for the accuracy or authenticity of any information in the articles printed in this newsletter. Nor are the opinions here expressed necessarily those of the officers of the Capital District Mineral Club nor of the Newsletter Staff as a whole.