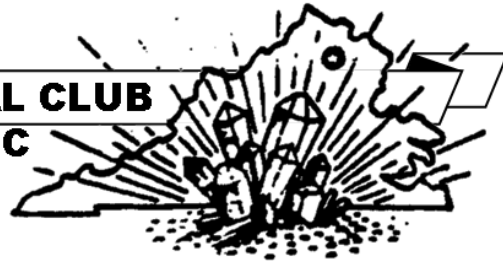




# THE NORTHERN VIRGINIA MINERAL CLUB INC



Crystals are the flowers of the Mineral Kingdom



## THE MINERAL NEWSLETTER

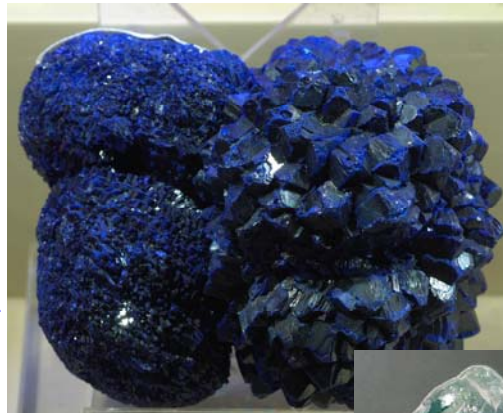
VOLUME 50 No. 1

JANUARY 2009

Find information also on our Club Website:  
<http://www.mineralclub.org>

### Something..... BLUE?

Although there don't appear to be any imminent marriages within the club, **Rob Robinson, USGS** is asking all club members to bring something BLUE (in mineral form, of course!) to the next club meeting. The program for the January Meeting is BLUE minerals, so please bring your favorites to the meeting so that we can all share in the splendor of this somewhat unusual mineral color.



If you are a new member and have not yet been to one of our meetings, this would be a great one to attend. Our meetings are at the Long Branch Nature Center in Arlington and start at 7:45pm.



### NVMC Schedule:

- 26 Jan: the first 2009 NVMC meeting at LBNC
- 23 Feb NVMC Meeting
- 07 Mar Del. Gem Show
- 23 Mar NVMC Meeting
- 25 April Ben Clement Mineral Dig (Kentucky)
- 25 April Sterling Hill Super Dig (New Jersey)

### Field Trip Help needed

The club really needs a member or two to step forward and help organize a couple of field trips. Now is a good time to start planning field trips for the March-April timeframe. Please contact the editor if you would like to plan a field trip. It is really not hard to do. The editor has (or can readily obtain) all the information that is needed to plan a field trip. Even if you do not want to plan a field trip but are willing to help, please step forward by sending a message to the editor. Field trips are one of the central components of our club's activities, and it is important that we continue a tradition of planning several field trips each year.

### Reminder! Renew Your Membership

It is time to renew your membership in the Northern Virginia Mineral Club if you have not already done so. Please send your membership dues to the following address:

**NORTHERN VIRGINIA MINERAL CLUB  
PO BOX 9851  
ALEXANDRIA, VA 22304**

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## January Meeting Agenda

**NVMC MEETING ---ACTION AGENDA---01/26/09**

**Call to order at 7:45 pm.**

**Recognize Guests...**

**Door Prizes...**

**Recognize 2008 NVMC President Awardee**

**Announcements:**

**Field Trips**

**Other short announcements from committee chairs or audience.**

**Show & Tell materials.**

**Old Business**

**Items from Floor**

**New Business...Please forward any new business item to me prior to the meeting, if you can, and be prepared to offer a motion. Thanks... My email address is d8olite@fastmail.fm.**

**Approval of minutes of December '08 NVMC meeting.**

**Budget report including '08 NVMC Show**

**Action Items from Floor**

**Adjourn for refreshments and program**

**January Program...Our very own Rob Robinson is speaking on minerals with a blue color. PLEASE BRING BLUE MINERALS FOR SHOW AND TELL. ROB NEEDS THEM FOR HIS PRESENTATION**

**Clear meeting room and leave building by 9:50 pm.**

## Board Nominations

If you are interested in helping the club by serving as a President or Vice President, please contact one of the Nominating Committee members to have yourself nominated for one of these two very important Board offices. Alternatively, if you know of someone that you feel would make a good candidate, you can nominate that person also. The nominating committee includes Barry Remer, George Reimherr, Jennifer Hammond, and Robert Clemenzi. We need to fill these positions soon!

## December Meeting Minutes

**Recorded by Kathy Hrechka, Secretary**

15 December 2008

President Wayne Sukow called the meeting to order at 9:10 p.m.

(Our holiday party began at 7:45 p.m. with sharing and feasting).

Sukow thanked the current officers for a job well done for 2008. Minutes from the November newsletter were approved. Sukow has chosen a recipient for his President's Award, but did not reveal who it was since that person was not at the meeting.

Officers: Barry Remer represented the nominating committee. He announced that Kathy Hrechka has agreed to continue as secretary, and Rick Reiber, will remain our club treasurer. Robert Winsor will continue to be our editor. The president and vice-president positions are vacant for 2009.

Nominations were open to the floor. Nobody responded to fill the vacancies.

A motion to keep secretary and treasurer for 2009 was moved and seconded.

Sukow explained his willingness to assist any new volunteer for president or the vice-president position.

The meeting was adjourned at 9:20 p.m.

Cynthia introduced the history of her Crystal Tree. The tree dates back to the 1960s when Paul Desautels taught crystallography to early club members.

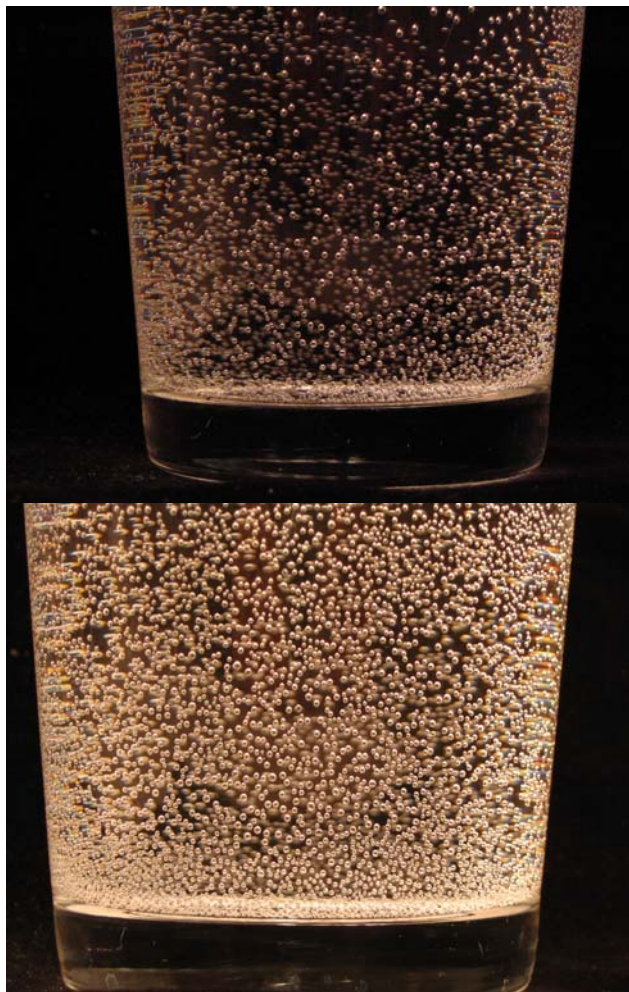
## Ben Clement Mineral Digs

The Ben Clement Mineral Museum has announced their planned digs for 2009. This Museum located in Marion, KY is known for its spectacular Fluorite samples not only on display in the museum but also for the quality of fluorite that can be obtained from the abandoned mine nearby. Several times a year they open the mine for collectors to dig through the dumps, or if you are so inclined there are locations where ambitious collectors can dig out some untouched veins.

The digs for 2009 are scheduled for April 25, May 23, June 6th & 7th, July 25, August 22, September 19, October 17. June 6th and 7th is also the weekend of their Gem, Mineral, Fossil and Jewelry Show. Contact the Editor for more information.

Please see the Nov. 2008 Mineral Newsletter for an article about the trip that the Editor and his daughter took to this location. It was a lot of fun!

## The Prez Says.... TINY BUBBLES



If you were at the NVMC 2008 Christmas Party you may recall that I challenged each of the club members to “fill” (1/2 to 3/4) a clear glass with tap water and set it aside for the night and report, via email, to the Prez, what you observed the next morning. He’s still waiting. Wait there’s still time. before the January meeting. The two pictures above are what the Prez observed for two different glasses filled with tap water the night before and left stand at 65-68F two different mornings . What’s going on the Prez Says?

If you look at the **INFORMATIONAL AGENDA** below you’ll see there are many Eastern Federation programs, which the NVMC has not participated in for several years. What’s going on?

The year is young. There’s time left for NVMV members to get involved and share with other club members and other mineral clubs so they will know “What’s Going On” in the NVMC in 2009.

You ask, what’s going on? That’s easy to answer. I’m mining the NVMC members for ideas and volunteers... What I’m hoping is that the ore can be refined and the metals and gems, formed and polished into artifacts we’re all proud of in December 2009.

**Informational Agenda...Neither Action Nor Discussion Are Needed...Please Email me [d8olite@fastmail.fm](mailto:d8olite@fastmail.fm) with names and/or comments.**

**Nancy Weiser’s Memorial....** Exec.Bd. approved sending a \$50 check to Heartland Hospice in Fairfax, VA. As a memorial

**Status of the Fred Schaefermeyer scholarship?** There seems to be little interest in making an award. Please have a motion prepared for the January meeting if you support making such an award for 2009.

**Committee chairs STILL needed:**

**NVMC Rockhound of the Year (2009)...**

**Audit Committee Chair...Needed Immediately. Volunteers are welcome.**

**Historian...**

**Hospitality...Karen Lewis**

**Each-One-Teach-One Committee Chair...**

**Junior Activities...**

**Ways and Means...Rob Robinson**

**Webmaster...**

**Field Trip Chair...**

**Delegate to 2009 EFMLS Annual Meeting...If the NVMC is to be represented consideration should be given to providing some club support to attend. Again, have a motion prepared for the January meeting.**

**The PREZ**



## Growing Crystals part 1

By Robert Winsor

This is a great time of year to grow crystals (if you are so inclined). Not only are the days short, but the air is cold and dry, which is ideal for growing really great looking crystals.

Crystal growing can be a fun process to partake, and often can produce some very nice looking results. It is also educational and makes an excellent science project for middle school and high school students.

I started growing crystals when I was in high school, and discovered many interesting phenomena that are easy to observe. Since then, I have even grown crystals professionally so that I could have optical-quality materials to work with (there are some nice crystals that can be easily grown that allow interesting work with polarization). This article is part 1 of a three-part series of articles on growing crystals, and will cover the common sulfates found in the home or at the garden center.

There are some common household materials that make excellent choices for growing crystals. Most common is sugar, which is fun because many people like to eat what they grow. Also very common is salt, which takes a lot more time, but can produce some nice results. Less well known is a cooking chemical known as Alum. This substance is basically Aluminum Potassium Sulfate. It can be grown into water-clear crystals that have almost triangular faces, and is easy to work with. Much less common, though, is Cupric Sulfate (Pentahydrate). This is commonly found in garden centers as root killer for trees (mixed with water and poured onto the stump of a freshly cut tree). This substance is my personal favorite for crystal growing because of its nice blue color and tendency to form isolated and sometimes twinned crystals. Epsom Salts can also be used, but this substance gives off water over time (it is efflorescent) and eventually the crystals will fall to powder. Cupric Sulfate is also efflorescent, but to a much lesser extent and will last a long time



Copper Sulfate 5H<sub>2</sub>O (Wikipedia)

in more humid regions of the country like Virginia.

When growing crystals, it is important to remember that time is your friend. During growth, slow is good. Fast is bad. Sometimes fast produces interesting results, as with salt, which forms interesting "Hopper" growth (I recommend trying it, because it's easy and interesting to observe). When working with sugar, fast is good only because what doesn't form overnight will take a couple months to finish, but even for the overnight process, care should be taken to make the process slow.

This month we will cover the growing of two types of hydrated sulfates, cupric sulfate and alum. These are covered at the same time because the process is nearly identical.

I like to use a stainless steel pot because it can be cleaned after use without concern of anything in the pot leaching into solution (as may be possible with an aluminum pot) and setting it on the stove to heat the solution is safe. For the ratio of water to chemical, it varies a bit based on purity, but in general I like to start with at least a pound of chemical to two cups of water. Use distilled water for best results, available in most grocery stores.

Heat the solution to boiling. When boiling starts, reduce heat to *barely* maintain boil. Stir with a stainless steel spoon or fork. If there is undissolved chemical still at the bottom, you can add more water if you like, but if you want to start small, this amount of solution may be OK. The point is that you want to produce as much solution as possible without dissolving absolutely all of the chemical. Leaving some chemical undissolved ensures a supersaturated solution.

Continue "simmering" for at least 20 minutes, uncovered. This helps ensure super-saturation, as the rate of dissolution decreases as the saturation point is reached. Again, *make sure* there is still undissolved material in the pot. If you added too much water and all of the solids are gone, then just add more solids and simmer more to ensure super saturation.

While the solution is simmering, you can prepare a box filled with styrofoam peanuts (or some other means of really good insulation) surrounding a container. Prepare a glass or stainless steel container so that the simmering solution

## Growing Crystals (cont)

can be poured into the container while the container is nestled within the insulation. Make sure the container is large enough such that the solution will fill the container about 2/3 to 3/4 full.

Place the box in a location where it won't be disturbed but will be held at room temperature. Carefully remove the simmering solution from the heat and pour only the solution into the insulated container (avoid transfer of solids). Cover the container by closing the flaps of the box and taping over the top. This will ensure the solution cools very slowly. If you like, you may re-open the box after about an hour of time and drop into solution a single crystal of the chemical you are growing. This will form a "seed" and will become a location for growth. It is best to choose such a seed wisely - pick one that looks very nice! Cover the box and seal it again to hold in the heat.

The solution will cool very slowly in the box. As the solution cools, the saturation limit of the solution is reduced and therefore the chemical precipitates preferentially in the form of crystal growth. If the cooling process is too rapid, the growth will have more defects, and in general the points will be smaller and more numerous. If the cooling process is slow enough, the points will be larger and less numerous. The faces of the crystals will be cleaner. In the case of water-clear chemicals like alum, defects will make the mineral appear white or milky. If the cooling is slow enough though, they will be totally clear of defects.

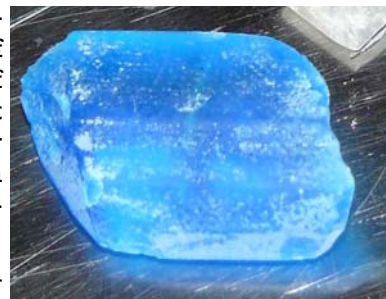
After about 12-18 hours of cooling, it's a good idea to look at the solution again. At this time, there should



Alum Crystal ~30mm grown by author showing triangular face shape.

be crystals easily observable, especially if a seed was used. If the crystals are not large enough for your liking, then you can do one of the following:

1. Do the same thing all over again but prepare more solution.
2. Remove the container of solution from the box and place in a dry, still location, allowing water to evaporate (make sure air can get to it). This is a slow process, taking weeks to complete. Make sure you choose a location that has a uniform temperature, as any increase in temperature will reverse crystal growth! Results of this technique are usually excellent.
3. Set the box in your garage or outdoors where it is cold. Allow the solution another 12-18 hours to cool to the colder temperature. REMOVE crystals from solution before bringing the solution back indoors, though. Otherwise they will (partially) dissolve again as the solution gets warmer.



CuSO<sub>4</sub> 5H<sub>2</sub>O Crystal ~20mm grown by author ~20 years ago



Alum Crystals ~6mm each grown by author ~20 years ago

After removing crystals from solution, pat dry with tissue paper. Now, what to do with the remaining solution after removing the crystals? Try setting it aside and let it evaporate. If you do this, you will have excellent crystals a few months later which will make great seed crystals for the next attempt.

Have fun growing crystals! Next month, we will cover the growth of salt crystals both for hopper growth (fast) and regular growth that produces smooth faces. In March, we will cover the growth of sugar crystals and techniques for observing growth..



## December Potluck gathering a Joy!

Thanks to Sheryl Sims for providing these pictures from the December meeting!



## Gem & Mineral Show

Saturday March 7, 2009 and Sunday March 8, 2009

The Delaware Mineralogical Society, Inc. will hold its 46th Annual Earth Science Gem and Mineral Show @ Delaware Technical and Community College @ I-95 Exit 4B, Churchmans Road (Rt. 58) Newark (Stanton), DE 19713. Hours Saturday are 10:00 a.m. to 6:00 p.m. and Sunday 11:00 a.m. till 5:00 p.m. The show features educational exhibits of mineral, lapidary and fossil specimens, displays from regional and university museums, an expanded roster of fine dealers of minerals, fossils, gems, jewelry and lapidary supplies, door prizes, demonstrations of gem cutting and polishing and a children's table, where youngsters may purchase inexpensive mineral and fossil specimens. Admission is \$5.00, \$4.00 for seniors, \$3.00 for young-

sters between 12 and 16, and free for children under 12 accompanied by an adult. The Delaware Mineralogical Society is a non-profit organization, affiliated with the Eastern Federation of Mineral Societies, and dedicated to learning and teaching about the earth sciences, rocks, minerals, fossils and the lapidary arts. Membership is open to all who are interested in these areas. Info and Coupons at [www.delminociety.net](http://www.delminociety.net) or contact [gene@fossilnut.com](mailto:gene@fossilnut.com).

For further information, contact:

Gene Hartstein, (E-Mail- [gene@fossilnut.com](mailto:gene@fossilnut.com))  
(Publicity)

Wayne Urion (302) 998-0686 (E-Mail-  
[wurion@aol.com](mailto:wurion@aol.com)) (Show Chair)

## Schedule

Upcoming Events to plan for:

**26 Jan: the first 2009 NVMC meeting at LBNC**

**23 Feb NVMC Meeting**

**07 Mar Del. Gem Show**

**23 Mar NVMC Meeting**

**25 April Ben Clement Mineral Dig (Kentucky)**

**25 April Sterling Hill Super Dig (New Jersey)**

## Go Emerald

**Electronic Newsletter:** You can save some paper by electing to have the electronic-only newsletter. Just send email to the editor to have your newsletter delivered by email only. It saves money, you get the newsletter sooner, and it is in full color. Send email to [photech@comcast.net](mailto:photech@comcast.net)

## The Board of Directors

Do you have a question for one of our Board members? To the right you can find email addresses and phone numbers for club officers (Note imminent changes for Prez and Vice Prez!).

Also, if you would like to attend a meeting of the Board of Directors, please contact Wayne Sukow and let him know ahead of time. All club members are welcome at Board meetings!

Board Meetings are held the second Thursday of each month at 7:30pm at Wayne's home in Fairfax. Please contact Wayne for directions.

President: Wayne Sukow

[d8olite@fastmail.fm](mailto:d8olite@fastmail.fm) (703) 280-8108

Vice President: Jenn Hammond (703-585-3046)

[cherryflamez@yahoo.com](mailto:cherryflamez@yahoo.com)

Secretary: Kathy Hrechka

[kshrechka@msn.com](mailto:kshrechka@msn.com) (703) 765-3187

Treasurer: Rick Reiber

[rickgr3@comcast.net](mailto:rickgr3@comcast.net) (703) 578-4224



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35740 Roundleaf Ct.  
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E-mail: phototech @ comcast.net



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PLEASE VISIT OUR WEBSITE:  
[HTTP://www.mineralclub.org](http://www.mineralclub.org)

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## The Northern Virginia Mineral Club

**Purpose:** To promote, educate and encourage interest in geology, mineralogy, lapidary arts and related sciences. The society is a member of Eastern Federation of Mineralogical and Lapidary Societies (EFMLS)

<http://www.amfed.org/efmls> and American Federation of Mineralogical Societies (AFMS)  
<http://www.amfed.org>.

**Dues:** Due by 1 January of each year; \$15.00 Individual, \$20.00 Family, and \$6.00 Junior (under 16, sponsored by an adult member).

**Meetings** are held at 7:45 p.m. on the fourth Monday of each month (except

May and December\*) at **Long Branch Nature Center**, 625 Carlin Springs Road, Arlington, VA 22204. Phone (703) 228-6535. (No meeting in July & August.)

(\*Changes announced in the newsletter.) Snow schedule - Arlington county schools.

**Visitors are Always Welcome at our Club Meetings.**

**TIME TO RENEW!**

**Renew your membership in the Northern Virginia Mineral Club!**

**NORTHERN VIRGINIA MINERAL CLUB  
PO Box 9851  
ALEXANDRIA, VA 22304**

You can send your Newsletter articles to:

Robert Winsor  
35740 Roundleaf Ct.  
Round Hill, VA 20141

Or via email: phototech @ comcast.net