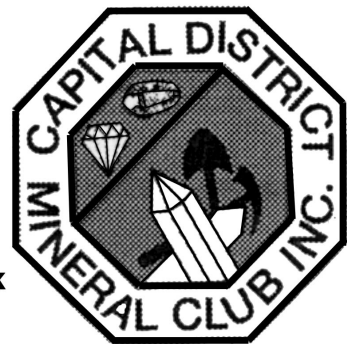


THE CAPITAL ROCKHOUNDER



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

NOVEMBER 2004

November Meeting

Yes, it's time once again to hold our monthly meetings. The November meeting of the Capital District Mineral Club will be held on Thursday, November 4th, 2004. We will meet in the Student Center on the first floor of the New York State Museum, Madison Ave., Albany, NY (unless otherwise noted at the front security desk). Please sign in and out at the security desk. The museum doors will be open from 7:00-7:15pm and the meeting will begin around 7:30pm. Please be on time since after 7:15pm, we will no longer let you in. Please also note that no one will be there to let you in the door prior to 7pm either (so bring your mittens and your scarf if you intend to wait by the window for 7 to arrive).

November Program

Dr. John W. Delano, at the University of Albany, will be our guest speaker. His topic will be "Updating the U.S. Mars Missions". Part I will deal with the mineralogy and geochemistry aspects at the two Mars rover sites. Part II will be a discussion of the plans for future missions in space.

Dr. Delano has made presentations to the mineral club over the past few years and always delighted his audience with his dynamic presentations and lectures. A few items in his biographic data include: Ph.D. in geochemistry, Distinguished Teaching Professor in the Department of Earth and Atmospheric Sciences and in the Department of Chemistry at SUNY Albany; author of 55 research papers in professional scientific journals; Associate Director of New York Center for Studies on the Origin of Life (a NASA funded center with Rensselaer Polytechnic Institute and SUNY Albany); and Principal Investigator in the NASA Exobiology Program.

Review of October Program

Michael Hawkins let the group go to the "Mineral Gallery" in the main area of the museum. After allowing everyone to look over the thirteen show cases at their own pace, he then discussed the purpose of the collection, acquisition and loans of specimens, and the individual items in the cases. He followed up with questions from the audience. It was very well attended.

Program Committee

The Program Committee would like to hear from any member willing to give a presentation or knowing someone who may give an interesting talk relating to our hobby. In January we plan to show the video "The Building of the Panama Canal". In February, Richard Stein will again do his "Many Faces of Calcite" program. That leaves March, April, and May open for volunteers. So call George Gearhardt at 518-355-0670 at your earliest convenience and help our club continue to enjoy the hobby.

Nominating Committee

The Nominating Committee is now looking for volunteers to club offices. If you or anyone you know would like to be considered for the Presidency, Vice-Presidency, Secretary, or Treasurer positions of this club, please contact Barbara and George Gearhardt at (518)355-0670 or Richard Stein at (518)355-4423.

Dues Are Due

The Capital District Mineral Club, Inc. has a fiscal year that begins with September 1 and ends with August 31. That means the new year started already. Look at the mailing label on your newsletter and if, after your name, the numbers "8/04" appear, your membership has expired August 31, 2004. I highlighted it in green for easy viewing. Please renew by completing a membership form included in this newsletter or print a fuzzy one from our website (address on last page). Send checks, payable to the Capital District Mineral Club, to our post office box (address on last page), or you can renew at our monthly meeting. You will receive your new membership cards (ours and EFMLS) either by mail or at the meeting. Please note that you must have an up-to-date membership card to participate in the December Auction. You may update on site at the dinner as a last resort.

Upcoming Field Trips

It is kind of getting cold out there, but I believe that the black flies are now gone, so if anyone has an interesting fieldtrip for the future, please announce it the meeting or let us know for future newsletters. Also, anyone wishing

to join the Field Trip Committee, let someone know at the next meeting.

EFTA November 2004 Field Trips

Contact Bob Hartig <rockbob@nycap.rr.com>

I lost my password for the website in my move. I'll get another one soon. In the meantime, contact Bob for the future November trips if there are any.

Upcoming Mineral Shows

Nov. 6-7, Old Greenwich, CT. 16th annual show; Stamford Mineralogical Society; Eastern Greenwich Civic Center, 90 Harding Rd.; Sat. 9:30-5, Sun. 10-4:30; contact John Holmstrom, (203) 322-1984; e-mail: <jholms13@earthlink.net>; Web site: <www.stamfordmineralsociety.org>

Nov. 6-7, Frazer, PA. Tuscarora Lapidary Society Presents "Gemarama 2004". Sat. 10-6; Sun. 10-5; CFS, The School at Church Farm, North side of Business Route 30, 1/2 mile west of Frazer-Route 30 exit off Route 202; Donation \$5; contact info <www.lapidary.org>.

Nov. 6-7, Media, PA. Friends of Mineralogy, Pennsylvania Chapter, 2004 Fall Symposium for the mineral collecting community on "Eastern Classic Locations - Part 1" Delaware County Institute of Science, 11 Veterans Square, Media, PA; Sat. 8-4; Sun. Field Trips TBA. Contact: Fred STohl, 10 Mullen Dr., Toms River, NJ 08753; (732)341-3553; or Arnold Mogul, 15 Oak Rd., Schuylkill Haven, PA 17972; (570)739-4034; pioche@losch.net>.

Nov. 13-14, Greenvale (Long Island), NY. 42nd annual show; Nassau Mineral Club; Clark Center, SUNY College at Old Westbury, Rte. 107; Sat. 10-6, Sun. 10-5; contact Eva Kokoris, (516) 707-9926; e-mail: <info@nassaumineralclub.com>; Web site: <www.nassaumineralclub.com>.

Nov. 13-14, York, PA. Show, The White Rose Intergalactic Bead Festival Intergalactic Bead Shows; York Fairgrounds and Expo Center, 334 Carlisle Ave.; Sat. 10-5, Sun. 10-5; admission \$5 Sat., \$4 Sun.; contact Ankur Yadav, (888) 729-6904; Web site: <www.beadshows.com>.

Nov. 20-21, Montvale, NJ. 14th annual show; Pascack Hills High School Senior Class; Pascack Hills High School, Grand Ave. and Spring Valley Rd.; Sat. 10-5, Sun. 10-4; Contact Somethings, (201) 262-2726; e-mail: somthg@bellatlantic.net.

Nov. 20-21, Worcester, MA. Worcester Mineral Club's 29th Annual Jewelry, Gem, Mineral, and Fossil Show; Sat. 10-5; Sun. 10-5; National Guard Armory, 701 Lincoln St., Worcester, MA. 1-290, Exit 22 - Main St. Shrewsbury, toward Worcester, through light, up hill, armory and parking on left; Contact: Worcester Mineral Club, P.O. Box 2278, Worcester, MA 01613-2278; (413)477-0107.

Nov. 27-28, Newark, DE. Show, Mid-Atlantic States Intergalactic Bead Festival Intergalactic Bead Shows; Aetna Firehouse, 400 Ogletown Rd.; Sat. 10-5, Sun. 10-5; admission \$5 Sat., \$4 Sun.; Contact Ankur Yadav, (888)729-6904; Web site: <www.beadshows.com>.

Nov. 27-28, Morristown, NJ. Rock and Mineral Weekend at the Morris Museum. Presented by the Morris Museum Mineralogical Society; Sat 10-5; Sun 1-5; Adults \$7. Contact: (973)971-3720; <www.MorrisMuseum.org>.

Dec. 4-5, Johnstown, PA. Show, The White Rose City Intergalactic Bead Festival Intergalactic Bead Shows; Frank J. Pasquerilla Conference Center, 301 Napoleon St.; Sat. 10-5, Sun. 10-5; admission \$5 Sat., \$4 Sun.; contact Ankur Yadav, (888) 729-6904; Web site: <www.beadshows.com>.

Dec. 11-12, Fitchburg, MA. Show, Bay Staters Intergalactic Bead Festival Intergalactic Bead Shows; Best Western Royal Plaza Hotel and Trade Center, 150 Royal Plaza Dr.; Sat. 10-5, Sun. 10-5; admission \$5 Sat., \$4 Sun.; contact Ankur Yadav, (888) 729-6904; Web site: <www.beadshows.com>.

Dec. 26-30, Quartzite, AZ. 39th annual show, QIA Pow Wow Quartzsite Improvement Association; 235 E. Ironwood Dr.; Wed. 9-5, Thu. 9-5, Fri. 9-5, Sat. 9-5, Sun. 9-5; free admission; more than 400 vendors; contact Diane Abbott, P.O. Box 881, Quartzsite, AZ 85346-0881, (928) 927-6325; e-mail: <qia@redrivernet.com>; Web site: <www.quartzsiteimprovementassoc.com>.

Interesting Web Links

Submitted by George and Barbara Gearhardt

Barbara Gearhardt thought you might be interested in a new online learning program: HP online courses, available at <www.hponlinecourses.com>

Barbara Gearhardt would like to notify you about Adobe Photoshop 7 basics. To learn more visit this website: <hponlinecourses.com/courses/overview.jsp?courseId=1002>

George Gearhardt would like to notify you about...Another interesting website is the monthly newsletter from Mama's Minerals, a dealer in Albuquerque, NM <www.mamasmineral.com> and among the items for sale is a section of about a dozen articles which might be of interest to our newer members. "Rocks and Minerals Compared" is a short two page article while "Directions for Rock Tumbling" is eight pages. This is followed by "How to Tumble Polish Glass" a mere four pages. Anyone can sign up to receive the monthly newsletter, no purchase is required.

Here and There

(Reprinted with permission from Miller Magazines, Nov. 2004)

- Summarized by George Gearhardt

The SHOP TALK column written by Willaim A. Kapple dealt with "The Internet". Cutting a slab of rough rock is illustrated in a website on our local Union College in Schenectady <www.union.edu/PUBLIC/GEODEPT/hollocher/saws>. Once on the Union College site it takes a few minutes to find the particular one referred to, but the rewards are worth the sifting necessary. There are "excellent close up pictures and clear text on the use of both slab and trim saws. This leads to the next step of seeing how the slab is changed into a "cabachon" or polished stone. Type in <rockhounds.com/rockshop/oplc_cab.html>. This will bring up "bob's rockshop with cabachon making 101". Step by step text and photos will show just how a "cabachon" comes into being. Other sites, such as "faceting" will be covered in <www.gemcutter.com/getstart.htm> for a very comprehensive introduction to the fascinating aspect of the gemstone hobby. General information about both lapidary and jewelry making can be found

at <www.gensociety.org/info/finfo.htm>. There is a section on the fundamentals of lapidary including an introduction and information on making smaller pieces, tumbling, cabachon cutting and faceting. The list goes on and on.

Funny Section

Submitted by Amy Sternstein

GEOLOGY., n. The science of the earth's crust to which, doubtless, will be added that of its interior whenever a man shall come up garrulous out of a well. The geological formations of the globe already noted are catalogued thus: The Primary, or lower one, consists of rocks, bones or mired mules, gas-pipes, miners' tools, antique statues minus the nose, Spanish doubloons, and ancestors. The Secondary is largely made up of red worms and moles. The Tertiary comprises railway tracks, patent pavements, grass, snakes, moldy boots, beer bottles, tomato cans, intoxicated citizens, garbage, anarchists, snap-dogs, and fools.

*-Ambrose Bierce, The Devil's Dictionary
US author and satirist (1842-1914)*

The meek shall inherit the Earth, but not its mineral rights.

*- J. Paul Getty
US oil industrialist (1892-1976)*

Real Answers from Earth Science Exams
<www.ahajokes.com>

- The terrestrial planets are much larger than the gas giants.
- Wegener found matching bedbugs on opposite sides of the Atlantic.
- The main problem associated with limestone aquifers is Lyme disease.
- We don't have rock salt on Guam because that forms from evaporation of oceans and we don't have oceans on Guam.
- Erie, Pennsylvania has no volcanoes because it's too cold there.
- The most important agent of landscape formation on Guam is greyhounds - they are intelligent.
- We know that the sun is much farther away from us than the moon is, because we can see stars between us and the sun, but not between us and the moon.
- The rear end of a trilobite is called a trilobutt.

Dense As A Rock

*by William S. Cordua
University of Wisconsin River Falls*

Rocks are pretty dense, but some are denser than others. Estimation of a rock's or mineral's density can help in its identification. Density is the mass (grams) of a substance found in a particular volume (cubic centimeters). A related value, specific gravity, compares a mineral's volume to that of an equal volume of water. Both specific gravity and density are the same number, but density has units, (grams per cubic centimeter or g/cc) while specific gravity is unitless. Thus quartz has a specific gravity of 2.65 and a density of 2.65 g/cc.

One can heft a rock to estimate density. Less dense rocks will feel unusually light. Pumice is a good example of a low density rock. It has tiny air pockets, making it light enough to float on water. Or think of a geode with a large cavity in it. It will feel lighter than one that is nearly solid. Rocks that feel unusually heavy contain dense minerals such as iron ore, sulfides, gold or garnet. Most rock hounds have picked up enough rocks to know what a "average" rock should weigh for its size. Quartz, feldspar, granite and sandstone have "average" densities. If you pick up a chunk of vitreous red mineral, and it feels heavy for its size, you should consider that you aren't hefting quartz. Maybe you have a garnet, or scheelite.

A famous story is based on the use of density. The Greek scientist Archimedes was given a problem by his king, Heiro II. The king had sent a metal smith some gold to make a crown. He didn't want the smith to be adding silver and keeping some of the gold for himself. The king asked Archimedes how he could tell if the crown were pure gold. Archimedes had no immediate answer. He decided a relaxing bath may help him think. As he got into the tub, the rising water gave him his answer. The crown would displace a volume of water related to its mass, and its mass per volume would tell how much pure gold was present. Archimedes was supposedly so excited by this discovery, that he leaped from his bath and ran naked through the streets shouting "EUREKA" or "I've found it!" The crown was weighed. Then it was immersed in a vat full of water. The water that escaped was carefully measured, giving the volume. The density was then easily calculated. The crown was not pure gold, and the metal smith was suddenly the one in hot water.

Heft tests are fine for quick determinations of relatively pure minerals. Should one wish to get a mineral's density more accurately, Archimedes' measurements can be done with a equipment found in a typical high school lab. Here's one way to do it. Get a rather pure chunk of the mineral, perhaps 1 cm across. Measure the sample's mass (grams) on a balance. Then submerge the sample in a small graduated cylinder and note the increase in volume (milliliters = cubic centimeters of water). Divide the volume into the mass to get the density. Leave off the units to get the specific gravity. Most mineral books have charts listing minerals by their specific gravity. Remember, just like King Heiro's crown, the density you measure will be affected by any impurities, so don't be too fussy about how well you match a particular mineral's recorded density.

Fremont Civilization Kept Secret For Fifty Years

*by Don Kauffman
Reading, PA*

If keeping a secret is measure of integrity then a recent ticker on CNN followed by Internet research has found one honorable man. Fate of a centuries old civilization has been a stewardship of silence for an aging Utah rancher.

Now 74 years old, at the young age of 24, this senior citizen could have had fame and fortune when he purchased 4,000-plus acres of land out in a remote eastern part of the state. He chose to be silent.

Bauxite - Mother of Aluminum

by Bert Ellison

(reprinted with permission from the Author)

As can best be determined, he was sole proprietor of land left by ancient Americans. Until recently the land has had no other visitors, no pillagers or archaeologists.

Corn and rye have been found inside stone storage containers. If it were not for the dust covering them, handmade arrows were found on the ground as if they had been dropped yesterday.

A spokesman for the state declared that over 200 sites of interest have been identified. He continued that there are new discoveries every time an archaeological team goes out.

Remoteness and an easily defendable walled canyon entrance ensured solitude of the secret place of the Fremont people. The most conclusive reason for preservation of the ruins was unflinching will of one man to prevent anyone from entering his land. Until several years ago, he told no one of the early American archaeological trove.

Perhaps concerned about a dwindling income, the senior citizen sold the property to a public trust. Then the Bureau of Land Management acquired the property under secret agreement. Before a management plan could be properly ensured, information was leaked to a local newspaper.

It has been said, "If more than one person is told of a secret, then it is no longer a secret." Or for fast spread of information; telegraph, telephone, tell a newspaper. There are no more secrets.

The human buzzards are out there. Archaeologists working at sites have noticed an increase of mountain bikers and hikers high on the rims of the canyon. Before word of the find leaked out, there were not even curiosity seekers.

Now there are concerns about ravaging and looting of the newly revealed ruins. We can only hope that a federally mandated plan bolstered by the Archaeological Resources Protection Act will allow responsible persons to visit and appreciate these exquisite remains of an ancient human habitat.

The tenacity and integrity of the former landowner is most extremely admirable. He is living proof that there are still honorable men among us.

Whatever we can do to protect mineral, fossil and cultural heritage must be accomplished from a firm moral foundation. The stewardship of honest and honorable men must be built on by clubs, societies, and organizations; that strength of numbers must work with local, state and federal authorities to preserve and protect our significant geology, paleontology and artifacts from danger of extinction by actions of a few.

Article summary and comment inspired by CNN and the following:

"In Utah, ancient Ruins Are Revealed After Long Wait" The New York Times, nytimes.com July 1, 2004

<<http://www.nytimes.com/2004/07/01/national/01RUIN.html?position=&ei=5088&en=c8d2c>>

Through cooking pots and medicines to airplanes, aluminum (aluminium to Brits) enters our lives daily. Its light-weight and versatility, goes almost unnoticed. But because it is so chemically active the element is never found in nature. It has a great affinity for a number of other elements but silicon seems to be one of its favorites, resulting in a vast number of aluminum silicate minerals.

One would hardly guess that Al is third most abundant behind Oxygen and Silicon (Si) in the earth's crust. Most rocks and clays contain some, and since clays result from the weathering of all rocks, this is where to find the greatest concentration of Al. - Enter Bauxite and Laterite.

The exact processes by which clays concentrate to these minerals is not understood but they seem to involve several requirements; one is intensive weathering as provided by the heat and rainfall of tropics. Another is a location high enough and level enough to prevent removal of this residue so concentration can take place.

Views of dark red and orange soils commonly show up in TV shots of Africa and Australia for example, soils rich in iron and aluminum -- and usually lean in plant nutrition.

Authors vary in their names for these minerals but usually clays rich in iron -- often rich enough to be ores -- are called laterites (for "brick"). Clays rich in Al are considered bauxite (after Les Baux in France). The texture of these deposits varies from soft and friable to hard, dense, and pisolitic (pea-like) to oolitic (egg-like). Some are stratified and others are not. Colours vary too -- pink, red, brown, cream, yellow, and gray. Also bauxite may grade into laterite. Cleaned and purified to alumina (Al₂O₃) bauxite is the backbone of Al metal production (and rubies and sapphires too!).

To confuse further, the parent rock of bauxite and laterite varies from limestones in France, Italy, and Greece to nepheline syenite (closely related to the feldspars) in Arkansas to granite and diorite in Guyana, but both seem to be the result of intense weathering. In Arkansas and France, you ask? As continents have crossed and recrossed the Equator through geologic ages many present-day deposits appear in strange places.

One would assume that luxuriant jungles of the Congo and Amazon thrive in deep rich soil -- not so. Heat and heavy rain leach out nutrients unless they are promptly re-cycled into new growth.

This deficiency was driven home in the 1930's. Henry Ford - he of the Model T -- besides making steering wheels from soy beans, decided to grow his own tires. He cleared large areas of African jungle in order to congregate the usually scattered rubber trees into a handy plantation (no synthetic in those days) called "Fordlandia". After three years, the scheme came to naught as the exposed laterite soils turned to, well, "brick".

**CAPITAL DISTRICT MINERAL CLUB
DECEMBER 2, 2004
HOLIDAY BANQUET**

To be held at the GATEWAY DINER, 899 CENTRAL AVENUE, ALBANY, NY

Preview of specimens from 6:00pm to 7:00pm, auction at 8:00pm

Buffet to be served at 7:00pm

TOSSED SALAD

SIRLOIN TIPS AND MUSHROOMS WITH MADEIRA SAUCE

CHICKEN OREGANATO

RICE PILAF

GREEN BEANS IN TOMATO SAUCE

STRAWBERRY SHORTCAKE

ROLLS, TEA, COFFEE, SODA

\$17.00 total (inc. tax & tip)

Reservations and check must be received by November 26, 2004

You may call the Gearhardtts at 518-355-0670 or mail your reservations and check to the address below,

Names _____

Number attending _____ Amount enclosed _____

Please enclose a check made out to the Capital District Mineral Club and mail to the Capital District Mineral Club, PO Box 12814, Albany, NY 12212-2814 or hand it to George at the November meeting.

**CAPITAL DISTRICT MINERAL CLUB
P.O. Box 12814
Albany, New York 12212-2814**

MEMBERSHIP FORM

Name(s) _____ Phone _____

Street _____ Email _____

City _____ State _____ Zip _____

Membership Type: Family _____ Individual _____ Single _____

Dues are \$20.00 Family membership; \$14.00 Individual membership; \$5.00 Student membership

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

Officers:

| | | |
|-----------|------------------|--------------|
| President | Mark Kilmer | 518-725-7629 |
| Vice Pres | Paul Van Schaick | 518-399-5810 |
| Secretary | Helen Eckler | 518-943-3459 |
| Treasurer | Ruth Schmidt | 518-943-4876 |

Newletter Staff:

Anne M. Woods <schmanie@albanyrockclub.com>
Amy Sternstein
Don Kauffman
Barbara Gearhardt
George Gearhardt

Website:

<www.albanyrockclub.com>

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.