



Meeting
Second Tuesday of each month
Van Matre Senior Citizens Center
1101 Spring Street
Mountain Home, AR

<http://www.ozarkearthscience.org/news.htm>
<http://www.ozarkearthscience.org>

August, 2011

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We are a member of the Midwest Federation of Mineralogy.

Sharon Waddell: Liaisons Officer - 417-256-8948

MWF Assistant Micromounter: Brenda Johnson

OBJECTS: To study and promote an interest in the earth sciences; Geology, paleontology, mineralogy, archaeology and the lapidary arts.

Meeting: On the second Tuesday of each month at 7:00 p.m. in the Van Matre Senior Citizens Center, 1101 Spring Street (Cooper Park), Mountain Home, Arkansas.

Dues: Active adults \$12.00 per year or family membership of \$20.00 per year. Junior membership is \$4.00 per year. Nonresident membership is \$8.00.

The President's Message

This never ending heat of summer seems to want to keep us down and away from rock hounding, but we stay busy anyway.

A few of us got together on July 29, and put a collection of beautiful minerals in the show cases at the Senior Center to help encourage the seniors to attend our show and bring all their grand's out too. Hopefully they will.

Ed has been in contact with the Salvation Army to help line up some workers to help us to set up and tear down the show also. With all of us aging, the heavy lifting is out anymore and we will be paying to have it done. Each day should only take around two hours each for two able bodied

The Presidents Message continued –

men. I am confident that the Salvation Army has a list of some who would jump at the chance to make \$40 to \$45 on each evening.

Sharon is working on a field trip to the River Bluff Cave to view what they have brought out and are working on. I look forward to the trip.

Edward reminded me that he can take us for a micromount collecting trip too, but we will have to wait until cooler weather. So all you micromounters get yourself fit for a short hike.

Until then, please stay out of the sun and heat as much as possible. We need you to help at the upcoming show.

Brenda

**The Minutes of the July 12, 2011 Meeting
Janel Cotter, Secretary**

Brenda Johnson, Club President brought the meeting to order at 7:10

Club member **Kurt Schmitt** recently competed in the 2011 National Senior Olympics in Houston. **Kurt** won two silver medals and one bronze!

Sharon shared her new prize: a barite inside a geode that she found on a field trip to Flemingsburg, Kentucky.

Gretchen made a motion to accept the minutes from the June meeting, motion was seconded by **Sharon**.

Club Treasurer **Dorothy Hess** reported new club balance of \$1,462.43.

New business discussed by club members was field trips. Trips are still tentative at this time with members looking at different areas and dates. The club has one member **Sharon Waddell**, who is OSHA trained. A reminder of safety and proper attire was discussed by all members.

Edward Hakesley did not present a program at this meeting but has one ready for the next club meeting.

July's meeting was short due to the fact that club members were putting together Spin and Win prizes, along with finalizing any advertising and issues to assure that the August show is a success.

Safety from Aradasa Johnson's Desks

Skin cancer

DO YOU SEE SPOTS?

by Mel Albright - AFMS Safety Chairman

http://www.amfed.org/a_safetyAFMS1.htm#SunStroke

The next time you take a bath, stop afterwards and look over your skin all over your body. Do you see any spots? See any rough patches of skin? See any small "bumps" of white dead skin? Any moles that are changing or growing? Any thing else that looks unusual? If you do, it is time to see a Dermatologist. Maybe QUICK!

Sun damage to the skin is one of the major health problems today. But, it is not caused by what you have done lately. It depends on you sun exposure 10, 20, 30, or even 40 years ago. By far, the most serious problem you might see is **melanoma cancer**. This cancer spreads rapidly and is deadly. The four things that might indicate melanoma are: A varied color growth that is asymmetric has irregular edges is something to worry about. If it is larger than 6 mm in diameter, it is really dangerous. This includes long time moles that change size, color, or shape. Run! do not walk, to the doctor if you see something that might be this.

Next in importance are **basal cell carcinoma and squamous cell carcinoma**. Although not as deadly as melanoma, these can be serious if not treated. Any of these 5 things might indicate that these are present. 1. An open sore that bleeds, crusts, or oozes for more than 3 weeks. 2. A reddish patch. It may sometimes be crusty. It may itch or hurt. 3. A smooth growth with a rolled border with an indentation in the middle. 4. A shinny bump or nodule which is pearly or translucent. They are often pink, red, or white. Less common, they may be tan, black, or brown. They MAY BE CONFUSED with a mole. 5. A scar-like area which is white, yellow or waxy. It will be shinny and the surrounding skin is taut.

Also important are three pre-cancerous conditions. These may lead to cancer if they are untreated. **Solar or actinic keratoses** occur as rough, dry, pink to tan patches on sun exposed skin. These are caused by the ultraviolet in the sun and. **Leukoplakia** is a smooth, white patch which affects the mucous membranes, primarily the lips and inside the mouth. **Radiodermatitis** appears as a mottled area with a decrease of skin pigment.

We'll discuss how to limit skin damage from the sun in another article.

Sources: American Academy of Dermatology; The Skin Cancer Foundation

From the program chair, Edward Hakesley

The August program will be a 30 min DVD on the Illinois story part III, and the show-and-tell table will be Illinois fluorite and associated minerals (can include adjacent states).

The September program will be my talk on basic mineral identification techniques, and show-and-tell will be a member' specimen (or two) that they can test or I can test.

I would like a note in the bulletin that backup volunteers, especially Friday, may be needed to help with the heavy lifting.

Recreational Gold Panning and Rockhounding

There is still gold in them thar hills! The lure of gold is what brought the miners to Alaska over 100 years ago and is still attracting folks searching for that elusive nugget today.



In northern Alaska, panning is allowed on any federal stream segment along the **Dalton Highway south of Antigon Pass** (MP 244), with the following exceptions: no panning in the pipeline right-of-way (27 feet or 8.2 m on either side of the pipeline) and no panning on federal mining claims without permission. For more detailed information, pick up a copy of the ***Dalton Highway Mineral Collection*** at one of the visitor centers or by contacting the **Fairbanks District Office**.

This free brochure lists creeks and rivers open to recreational mineral collection and rate their potential for finding gold.

In Interior Alaska, the **Nome Creek Valley** offers a four-mile area set aside for recreational gold panning. Gold panning is limited to hand tools and light equipment, such as gold pans, rocker boxes, sluice boxes, or picks and shovels. Use of motorized equipment, such as backhoes, bulldozers and suction dredges, are not allowed without a permit. Read more about the Nome Creek Valley gold panning area and its gold mining history

There are many areas available for recreational gold panning just outside of Anchorage on the beautiful scenic **Kenai Peninsula**. To learn more about how to gold pan, where to go and what to look for, pick up the USDA Forest Service booklet ***Gold Panning: The guide to recreational gold panning on the Kenai Peninsula, Chugach National Forest, Alaska*** from one of the visitor centers.



Recreational Gold Panning and Rockhounding continued -



The Crow Creek Mine is a recreational mine in Anchorage. What was the largest mine producing area in South Central Alaska during World War II, has now become a tourist attraction where people from all over the world come here to try their luck and find gold. Local miners help the visitors through the process of the gold hunt which gives visitors a first hand experience with mining.

Via the **Mozarkite** – April, 2011

Mineral of the Month – Calcite

By Dave Jacobson

From The *Canaveral Moonstone* March 2011

The mineral of the month is Calcite, which is the common crystalline form of natural calcium carbonate (CaCO_3), the basic constituent of limestone, marble and chalk. Calcite is one of our more common minerals and located just about everywhere, even forming in pockets in the cochin rock found along the beach in Brevard County. I have found several specimens with calcite embedded in the cochina. Calcite is noted for the variety of its crystal and massive forms and is represented in most mineral collections.

Calcite is a carbonate mineral with crystals in Hexagonal system. Calcite crystals form in many varied shapes. That is one of the neat things about collecting calcite. You can put a large collection together with varied specimens. The material can also be massive. It is mostly colorless, white or various pale tints, although it can be any color depending on the mineral impurities associated with the calcite. Its hardness is approximately 3 with a specific gravity of 2.7. One of the tests for calcite is the use of cold diluted hydrochloric or muriatic acid. Anybody with an in ground swimming pool should have an ample supply of acid. Calcite will bubble vigorously when a drop of hydrochloric acid is applied to the specimen. Some varieties of calcite will fluoresce when exposed to ultra violet light such as some calcites from Franklin, New Jersey.

Calcite from Franklin fluoresces red due to the manganese activator in this material. Calcite is a common mineral with many unique specimens from locations all over the world. Calcite gets its name from the Latin calx, calis, "lime," originally from the Greek chalx "burnt lime."

The following reference materials were used in preparing this article:

A Field Guide to Rocks And Minerals by Frederick H. Pough.

Mineralogy For Amateurs by John Sinkankus.

Simon & Schusters Guide to Rocks And Minerals.

Amethyst Galleries Mineral Gallery;

Internet at <http://mineral.galleries.com>

via *The Mountain Gem*, April, 2011

Pyrite Cubes

By Ed Peterson

Several years ago I bought a group of cubic pyrite crystals from a rather small dealer's stand (see the accompanying picture). The price was minimal. The individual crystals are roughly 5/8" on a side. The crystals are from Ampliacion, a Victoria Mine, Navajun, La Rioja, Spain, an area known for its large, striking, "most perfect," pyrite crystals. They are also somewhat unique in that only faint striations are visible on the crystal surfaces. The crystals from this mine are known throughout the world for their beauty, the specular brightness of their faces, the complexity of combinations of crystals and their brass yellow color.

The mine that they're from has an interesting history. A miner, Pedro Ansorena Garret, in the 1960's discovered this deposit in a remote corner

of La Rioja. His son now operates the mine, conducts tours, tells about the history, and arranges for collectors to dig through the matrix. The mine is located in a rather arid area not far from the Alcarama Mountains. It's an area with some farming and cattle raising and a few villagers. Historically, inhabitants were attracted to the metallic stones found there.

Pyrite pieces are found in mosaics in a nearby city. Stories of the past, told by residents of the area, say that witches recommended the pyrite to cure throat and stomach aches. Crystals were called "pins" and "tanagos" and were used to bring rain. Women threw them over their shoulders to attract men. Shepherds used the sharp crystals in sling shots to kill wild animals.

Pedro, a trained miner and mineralogist for the Royal Asturian Mine Company, was looking for galena when he heard about the spectacular pyrite crystals. He knew the pyrite was an iron sulfide up to \$400-\$500.



Calcite continued -

Three veins in this mine, together, average about 2.5 meters in thickness. There is an estimated one million tons of pyrite and marl making up the veins. Roughly 30-35 tons of the material is excavated each year.

Via **News Nuggets**, April, 2011

Sloth radiocarbon date update

Dr. Holmes Semken

Another attempt for a direct radiocarbon date on the Tarkio Valley (Iowa) sloths failed. Bob Feranec reports that the National Ocean Sciences AMS (Accelerator Mass Spectrometry) Facility at the Woods Hole Oceanographic Institution could not obtain a sufficient quantity of CO₂ from the 2.5 milligram collagen sample that he collected via seven extractions from a molariform. Extraction on the tooth proved to be a labor intensive process to even recover a milligram. The sample, NOSAMS # 81815 labeled 10 RSF C14 005, which was adequate by weight, yielded only 1.7 micromoles of CO₂. When asked if sacrifice of a whole tooth would produce a date, Bob replied that we needed to recover at least 50 micromoles. This would require at least 150 extractions would be a few months work and still probably would not generate sufficient CO₂ for our purposes. He concluded, "I think that it is not going to be a datable specimen." Earlier, we had submitted a bone sample and a dental sample from the adult to the Keck Carbon Cycle Accelerator Mass Spectrometry facility at the University of California-Irvine. They could not recover enough collagen to date the specimen either. After attempts by two world class facilities, we are convinced that it is not possible to directly date sloth remains with current technology. Alternatives for direct dating are under consideration. Pollen and seeds are in the matrix and offer radiocarbon alternatives. There is also the potential to date the sediments above and below the sloth-bearing matrix. Exciting as they are, the Tarkio Valley sloths continue to be analytically evasive.

Sloth on. Holmes (source <http://slothcentral.com/>)

Via The Nugget, May, 2011

Refreshments this month are by Ernie Confer and Madelyn Anderson

Website of the Month

It is hard to resist purchasing a nice fossil for your collection, and it seems such a hassle to assume that you have to verify the authenticity of a nice looking fossil. But you do. The reference web page this month has been prepared by a dealer and is harsh on dealers who, perhaps without even realizing it, are selling fake fossils. Dealers can be fooled too. So spend some time with this web page: <http://www.paleodirect.com/fakefossils1.htm> Take a look at their home page too. They have some truly amazing (and they guarantee, authentic) fossils for sale. Check the price tags.... The one I really wanted (photo below) was priced at \$650,000. Never the less, the photos of the fossils are worth studying. If you don't have a computer, go to the library. You will spend hours on this site.... And note some great links to archeology and other fossil sites.



Via the Nugget, May, 2011

News of some -

Dorothy Hess informs us that her granddaughter, who recently went into the Navy, will be stationed aboard the aircraft carrier/nuclear warship, the USS John C. Stennis, out of Bremerton, Washington. We want to wish her the best of luck in her new duty station.

Edward Hakesley is suffering from an encapsulated injury to his shoulder and is having to undergo therapy for it. We wish him a speedy recovery.

On August 18, **Janel Cotter** will be arrested for letting cows run wild on the highway, if she does not raise \$500.00 to pay a bond. All the proceeds raised will go to the March of Dimes to help children. If you would like to donate, please see Janel at the club meeting.

Happy Birthday to **Harvey Johnson** on August 11.



GEM, MINERAL & FOSSIL SHOW

August 27 & 28, 2011

Sat. 10 a.m. – 6 p.m. Sun. 10 a.m. – 4:00 p.m.

**Van Matre Senior Citizens Center
1101 Spring Street
Cooper Park
Mountain Home, Arkansas**

**Gems, Minerals, Fossils
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What are Chocolate Diamonds

A chocolate diamond is a brown diamond, one of many types of colored diamonds. Other colored diamonds, also called fancy diamonds, include pink, yellow, blue, green, purple, black, red and orange. Although colored diamonds were once considered undesirable, chocolate diamonds became popular and are worn by those looking for an alternative to conventional white diamonds.

Most chocolate diamonds come from diamond mines in Australia. The natural occurring brown color is thought to be created by the earth's pressure on the diamonds deep in the earth. The shades of a chocolate diamond vary, but the color is fairly dark. The Gemology Institute of America (GIA) rates the color intensity of colored diamonds based on a scale from one to nine. Colored diamonds have the same hardness and other properties of white diamonds; only the color is different.

Other shades of brown diamonds include cognac, cinnamon, honey, clove and champagne. Champagne colored diamonds are light in color with a slightly reddish cast. Cinnamon diamonds are a reddish-brown, while the cognac variety of brown diamond is a warm reddish golden-brown. Clove colored diamonds are a dark olive. Honey diamonds are yellow-orange.

Chocolate diamond jewelry is made in a wide range of styles and types. It is available in yellow gold or white gold settings. Many pieces of chocolate diamond jewelry feature white diamonds as well. The contrast between light and dark sparkling gems can look very attractive. Turquoise or chocolate pearls are other striking additions to jewelry made with chocolate diamonds.



Via <http://www.wisegeek.com/what-is-a-chocolate-diamond.htm> and www.bingsearch.com

What is Zircon

Zircon, silicate mineral, zirconium silicate, $ZrSiO_4$, the principal source of zirconium. Zircon is widespread as an accessory mineral in felsic igneous rocks; it also occurs in metamorphic rocks and, fairly often, in detrital deposits. It occurs in beach sands in many parts of the world, particularly Australia, India, Brazil, and Florida, and is a common heavy mineral in sedimentary rocks. Gem varieties occur in stream gravels and detrital deposits, particularly in Indochina and Sri Lanka, but also in Myanmar (Burma), Australia, and New Zealand. Zircon forms an important part of the syenite of southern Norway and occurs in large crystals in Quebec. For detailed physical properties, *see* silicate mineral (table).

The high refractive index and dispersion of zircon cause it to approach diamond in fire and brilliancy. Several varietal names have been applied to coloured gems. Hyacinth (jacinth) includes the clear, transparent red, orange, and yellow varieties. Matura diamond, from Sri Lanka, is clear and colourless, either naturally or made so through heat treatment under oxidizing conditions. The name jargon, like zircon derived from Arabic *zargūn*, applies to all other colours. A lovely blue stone may be made by heat treatment under reducing conditions.

Below are some of the colors that zircon may be found in. They also come in red, orange and cinnamon, among other shades of yellow and blue.



Cambodian Blue



Cambodian Blush



African White



African Yellow

Via www.encyclopideabritanica.com and www.jtv.com

The Mysterious Azotic Topaz
By **Sharon John** for *the Mountain Gem*

Topaz of any type is a good jewelry stone and it is historically one of the most important gemstones. With its relatively high refractive index and hardness of eight on the Mohs scale, it can be used in any jewelry application, but should be protected from hard knocks.



A new high tech enhancement process applied to colorless stones such as topaz and quartz has created a colorful new variety called Azotic Topaz named after the company that invented the patented process.

Azotic Topaz displays a stunning rainbow effect that makes it unique. The color, brilliance and clarity of the final product depend very much on the quality, cut and polish of the original gemstone.

Brazil is the most important supplier for topaz. Other deposits are in Afghanistan, Australia, China, Japan, Madagascar, Mexico, Myanmar, Namibia, Nigeria, Pakistan, Russia, Sri Lanka, Ukraine, United States and Zimbabwe.

Azotic topaz is a high tech achievement that successfully conquered nature.

The Egyptians believed that topaz was colored with the golden glow of the mighty Sun god Ra. This made topaz a very powerful amulet that protected the faithful against harm. The Romans associated topaz with Jupiter, their god of the sun. In ancient times it was believed that topaz helped to improve eyesight. The Greeks trusted topaz's supernatural power to increase strength and make its wearer invisible in times of emergency. Topaz was also said to change color in the presence of poisoned food or drink.

Source: GemSelect.com

Picture from Gem Select via the *Mountain Gem*, February, 2011

Dates to Remember

August

- 28 – 29 Ozark Earth Science Gem, Mineral & Fossil Club Show, 1101 Spring Street, Cooper Park, Mountain Home, AR
- 19 – 20 Brighton, MO, 19th Annual Show, Machinists Hall Auditorium, 12365 St Charles Rock Rd (at I-270).
- 27 – 28 Peoria, IL, Annual Show, Grand Hotel, 4400 N Brandywine Dr., Peoria, IL

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