



# The Pineywoods Rooter

Newsletter of  
**PINE COUNTRY GEM & MINERAL SOCIETY**  
of Deep East Texas

July 2013

Volume 21 Number 7

Page 1

## Club Officers

President, Bill Talcott 384-8244  
Vice President, Joe Griggs 381-1123  
Secretary, Michelle Talcott 384-8244  
Treasurer, Sharon Stalsby 382-5314

Membership & Publicity,  
Jonetta Nash

### Newsletter Editor

John D. Nash 737 FM 254 S  
Jasper TX 75951-9580  
(409) 384-3974

johnnash1937@yahoo.com

Member News, Michelle Talcott  
fizzycola@sbcglobal.net

### Membership

Club Membership is open to all who  
are interested in the Earth Sciences  
and the Lapidary arts.

Dues are \$24 yearly for families,  
\$18 for single adults and \$2 for kids.

### Meetings

The regular monthly meeting is held  
on the third Thursday of every month  
at 7 p.m. in the Club Building at 110  
N.Zavalla St. in downtown Jasper.

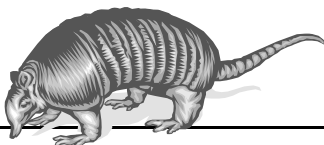
Visitors are invited to attend any of  
the regularly scheduled meetings.

### Club Purpose

Pine Country Gem & Mineral Society  
was formed for the purpose of  
encouraging interest and a better  
understanding of all phases of the Earth  
Sciences and Lapidary Arts and to  
promote fellowship and cooperation  
among members and with other  
groups with like interests.

### Member Club

South Central Federation of  
Mineralogical Societies  
and  
American Federation of  
Mineralogical Societies



## FROM THE PRESIDENT

Well, after an extended trip to Colorado and New Mexico we have arrived back to the heat of East Texas. Vacations are great, but being home even with the heat is still a welcome feeling. Got to do some good rock hunting with several pounds of Colorado Rhodonite and Colorado sowbelly Amethyst, along with some( or should I say a lot) of Apache Creek agate. Even got to visit several rock shops along the way and had several other rock hunting spots on the agenda, but Colorado wildfires keep us away from those sites. Fishing was good and our first time to go RVing was an experience we will not soon forget.

But back to reality, the annual show is coming up before we know it and I hope to get back on a schedule for the construction of our playroom or should I say our work room at the club house. It seems that everything has been put on hold for a few months, but that is about to change. As we approach mid- summer let us not forget about the Gulf coast hurricane season. Our program this Thursday night will be by Cindy VanDevender an Agrilife agent who will bring us a hurricane preparedness program. I know it is not rock related, but we all need to be reminded about hurricane season and what we can do to prepare for it. See you this coming Thursday night.

Bill

**NEXT MEETING: Thursday, July 18, 2013  
7:00 P.M.**

**Club House at 110 North Zavalla, Jasper TX**

**PROGRAM: Cindy VanDevender**

**“Hurricane Preparedness”**

UP-COMING SHOWS &

AUGUST 10-11 BATON ROUGE, LA  
Baton Rouge Gem & Mineral Soc.  
The Marriott

AUGUST 17-18 BOSSIER CITY, LA  
Ark-La-Tex Gem & Mineral Soc.  
Bossier City Civic Center  
SCFMS CONVENTION & SHOW

AUGUST 24-25 JASPER, TEXAS  
Pine Country Gem & Mineral Soc.  
Event Center, Hwy 190 West

SEPTEMBER 14-15 GRAPEVINE, TX  
Arlington Gem & Mineral Soc.  
Grapevine Convention Center

ANNIVERSARIES

NONE??

2013 Officers

President . . . . .Bill Talcott  
Vice President . . .Joe Griggs  
Secretary . . . . .Michelle Talcott  
Treasurer . . . . .Sharon Stalsby

Board Appointees

Activity - Field Trips . . . Fred Brown, Paul James  
Membership - Publicity . . Jonetta Nash  
Web Page . . . Sonja Richard  
Programs . . Bill Talcott  
Historian . . . OPEN  
Auction . . . John Nash  
Education . . . Janice Herron  
Chamber of Commerce...Wanda Page  
Show Chairperson . . Ann James  
Hostess...Donna Ducote  
Building Chairman...Bill Talcott  
Address Correspondence to:  
Pine Country Gem & Mineral Society  
P O Box 2513, Jasper TX 75951  
CLUB WEB SITE: [www.pinecountry-gms.org](http://www.pinecountry-gms.org)

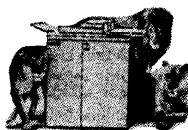
BIRTHDAYS

Bradley Wall 7/1  
Janice Herron 7/2  
Charles Kerr 7/13  
Wanda Page 7/23

BIRTHSTONE FOR JULY:

Ruby or Carnelion

Star graphics



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Notice to Exchange Bulletin Editors:

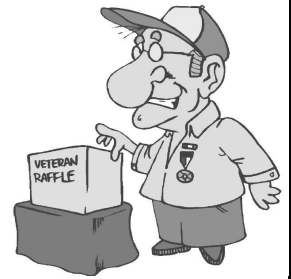
You may reprint any article in this newsletter in non-commercial club publications, provided that credit is given to the author of the article copied and to the Pineywoods Rooter. Editor

Note the new web address-  
[www.pinecountry-gms.org](http://www.pinecountry-gms.org)  
The web page is functioning now.

## Pine Country Gem & Mineral Society Meeting

Pine Country Gem and Mineral Society Meeting  
P. O. Box 2513 – Jasper, Texas –

**MINUTES FOR JUNE 20 2013**



Members began arriving by 6:00 o'clock to enjoy a pot luck supper at the clubhouse on Zavalla street.

The official meeting of the PCGMS was called to order by Joe Griggs, Vice President at 7:00 p.m. on June 20<sup>th</sup>. Matthew Malone, guest of Joe Griggs and Tom and Ramona Howell's grandchildren Savannah and Bubba Howell were welcomed by Joe. Our members with birthdays and anniversaries were also recognized.

Sharon Kerr was given an opportunity to invite everyone to join the Mine and Wine tour to the Tyler area sponsored by the Master Naturalists on Saturday June 22<sup>nd</sup>. Zeb and Carmon had joined the group for the previous trip and were looking forward to going again.

Ann James presented a program on "How to Build a Display Box For Fluorescent Minerals". Ann demonstrated the construction of the box and gave us a lot of information on the nature of the light spectrum. Ann reported that she had been invited to the summer program at the Diboll Library and represented our club there. Her future plans are to visit as many schools and libraries as possible to interest students and teachers in the study of gems and minerals as well as make them aware of PCGMS.

Ann serves as Third Vice President of the American Federation of Mineralogical Society and one of her duties is to judge programs submitted to the Federation. She encouraged our members to develop and submit a program to the Federation which would be judged and offered to all clubs for their use. Hopefully she will submit this program for next years judging.

After a brief break, John Nash conducted a lively auction.

Joe Griggs called the meeting back to order and John Nash made a motion the minutes as printed in the bulletin be approved. Ann seconded the motion and the vote carried.

Sharon Stalsby read the Treasurers report that was approved on a motion by John and seconded by Ron Ducote.

Committee reports by those in attendance were as follows:

Field Trip Chairmen: Fred and Paul set July 14<sup>th</sup> as a tentative date for a field trip to the Natural History Museum in Lufkin. Rich Geist invited those attending to come to his home after the museum visit and tour his shop and see his collections. Members will be notified of details at a later date.

Chamber of Commerce: Wanda Page reported on activities of the Chamber and reminded everyone of the Fourth of July Celebration on June 29<sup>th</sup>.

Website: Sonja Richard reported that work on the Website has begun and we will have the information about the show on the site as soon as possible.

Program Chairman: Ann James reported all the inside Vendor Spaces have been reserved and we are still getting requests for outside Vendors. Each Committee utilized during the Show has been contacted and they will be notifying the members with requests for help – working the different areas and providing materials for the booths. These plans will be more detailed at the July meeting.

Publicity: Jonetta Nash reported that post cards have been ordered and will be available for distribution at the next meeting. She also reported the back page ad for the new magazine East Texas Quarterly was purchased and the magazine will be

published the first part of July.

Bill Talcott had reported he would not be able to attend and represent PCGMS as the delegate to the SCFMS Annual Meeting in Bossier City on August 17<sup>th</sup> and 18<sup>th</sup>. The club elected Ron Ducote to serve as our delegate and he will be paid \$100 towards his travel expense as authorized in prior years.

On a motion from John Nash, seconded by Joe Griggs the meeting adjourned.

Persons attending the June 20<sup>th</sup> meeting: Ellis Clifton, Roger Page, Fred Brown, Maxine Wagner, Savannah Howell, Lonnie Stalsby, Ron Ducote, Charlotte Beebe, Robbie Smith, Sonja Richard, Donna Ducote, Ann James, Sharon Kerr, Paul James, Carmon Rike, Zeb Rike, John Nash, Janice Herron, Jody Dorman, Matthew Malone, Tom Howell, Sharon Stalsby, Tom Bailey, Ramona Howell, Wanda Page, Rich Geist, Ruth Howell, Joe Griggs and Bubba Howell.

Rich Geist won the door prize and Jonetta Nash was the winner of the half and half.

Jonetta Nash, Acting Secretary

### **If My Body Were a Car...**

This is the time I would be thinking about trading it in for a newer model. I've got bumps and dents and scratches in my finish, and my paint job is getting a little dull. But that's not the worst of it. My headlights are out of focus, and it's especially hard to see things up close. My traction is not as graceful as it once was—I slip and slide and skid and bump into things even in the best of weather. My whitewalls are stained with varicose veins. It takes me hours to reach my maximum speed. My fuel rate burns inefficiently. But here's the worst of it—almost every time I sneeze, cough, or sputter, either my radiator leaks or my exhaust backfires!

*from Beehive Buzzer 7/2012 via Strata Gem 3/2013 and Rocky Mountain Federation Newsletter 4/2013 via Backbender's*

### **Members Happenings**

By Michelle Talcott

Bill and Linda Talcott have returned from an extended time in Colorado. They enjoyed the cooler weather and beautiful scenery of the mountains. Bill caught some trout and they saw many deer, elk and moose. Michelle and Carter joined them for a couple of weeks.

From Michelle: Much of southern Colorado was being affected by the wildfires. On our way to Lake City, we were rerouted to avoid fires in the South Fork, Colorado vicinity and we saw a large fire at La Veta. We were able to see the fires across the Rio Grande Valley between Creede and Lake City. Fortunately the fires did not cross the mountains into Lake City but the smoke would settle in the valley over Lake San Cristobal at night. This area really needs some rain or snow. We took the ATV up to the Sunnyside mine and collected many pounds of rhodonite. From the top of the mountain we could really see the smoke from the fires. We also visited the Last Chance Mine in Creede, Colorado and collected nice samples of amethyst. We did some trout fishing every chance we could. Carter caught two fish before I could get my fly in the water.

We left Colorado and headed south into New Mexico. We did some shopping in Albuquerque and eventually made it to Reserve, New Mexico. I have heard about the Apache Creek agate and finally got to see it firsthand. We collected many pounds of beautiful samples. Our only limitation was how much we could carry off of the mountain. We were surprised one afternoon by seeing a herd of 30 to 35 elk. We were fortunate to have cool weather and beautiful scenery as well as great family time. As always we look forward to next year.

### **MY DOCTOR**

You know, doctors can be so frustrating. You wait a month and a half for an appointment, then he says, "I wish you had come to me sooner". via The Roadrunner, July 2013

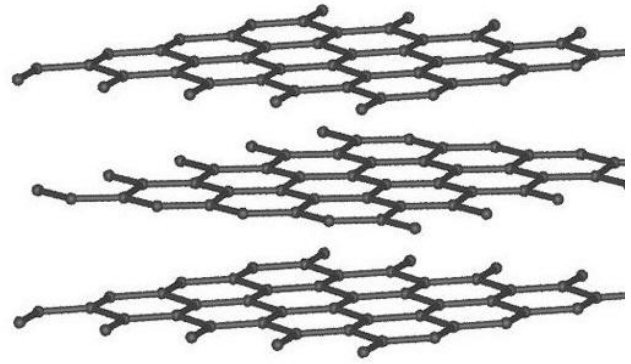
## WHAT IS HARDER THAN DIAMOND?—HIGH-TECH DIAMOND!

Zeb William Rike III

### COMPOSITION OF DIAMOND

We are all familiar with the fact that diamonds are pure carbon, the hardest of several allotropic forms. (\*) It is interesting that the hardest and softest minerals are both crystalline forms of carbon. Atomic structure of both diamond and graphite are shown for comparison. Diamonds crystallize in the cubic crystal form. The carbon atoms are shown for one diamond unit cell.

In Diamond, every carbon atom is covalently bonded to four others at corners of a regular tetrahedron. Angle between any two atoms in the tetrahedron is  $109^{\circ} 28'$ . (\*) The covalent bonding extends indefinitely in all directions, to the outer surfaces of the diamond crystal where each carbon is bonded to hydrogen or oxygen. (\*) (1-4)

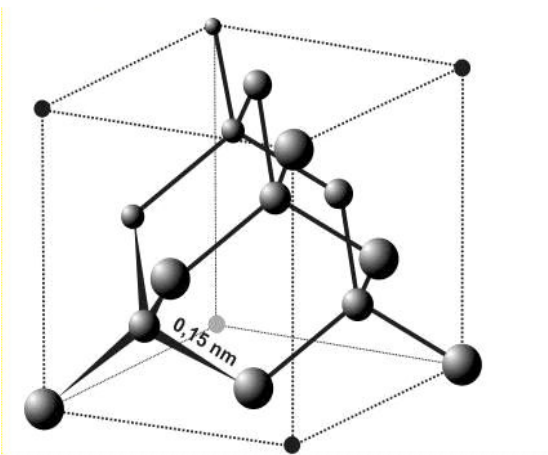


### GRAPHITE

We will mention in passing that the structure of graphite has stacked sheets of hexagonally bonded carbon atoms with no bonding between the sheets and it crystallizes in the hexagonal crystal system. The slipping of the sheets accounts for the softness and lubricity of graphite. (5)

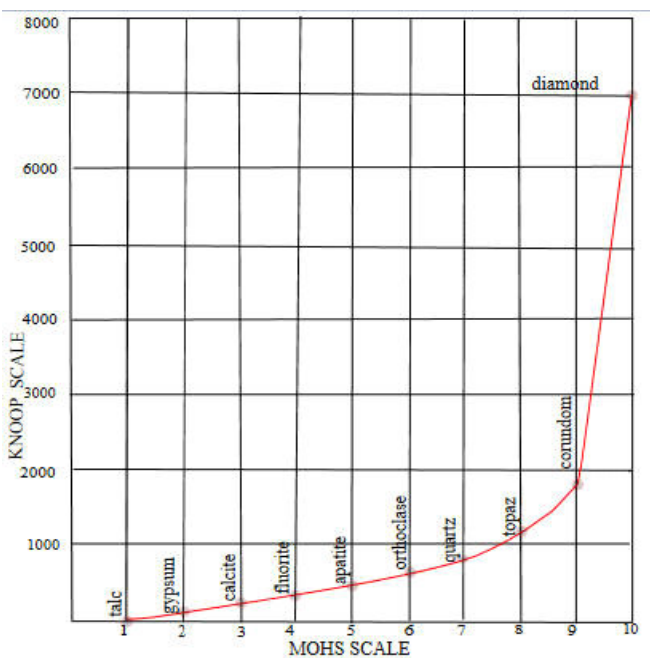
### HARDNESS OF DIAMOND (6-9)

Diamond is hard because of the strength of the covalent bonds throughout the crystal; any diamond is, in effect, a single molecule. Imperfections in the crystal lattice give a small degree of reduction of hardness. Diamonds are so hard that our familiar Moh's hardness scale (based on scratching one mineral with another) is insufficient to show relative hardness. There are other hardness scales which depend on measuring the size of an indentation of a diamond tip (under standard conditions) in the sample of interest. There is a way larger difference in Knoop indentation hardness between Moh's 9 and 10 than between 8 and 9. These scales can distinguish relative hardness of the ultra-hard, such as showing that some crystallographic planes in a diamond crystal are considerably harder than others. However, the indentation tip has to be made of the harder material; natural diamond will not indent the harder forms. Nano-diamond aggregates are harder than diamond; testing with a nano-diamond tip shows that a surface perpendicular to the [111] crystallographic direction



### DIAMOND

has a hardness of  $167^{\circ}\text{GPa}$  while the nano-diamond tip has hardness of  $310^{\circ}\text{GPa}$ . It is very hard to find numerical statements of hardness for the ultra-hard materials. Some crystal faces in the diamond are 100X harder than others. (3)



Natural diamond is about 98.98%  $^{12}\text{C}$  and about 1.02%  $^{13}\text{C}$ . Since  $^{13}\text{C}$  is about 8% more massive than  $^{12}\text{C}$  and makes slightly shorter bonds, each atom of  $^{13}\text{C}$  is a slight crystal defect. It is possible (but quite costly) to separate the  $^{12}\text{C}$  and  $^{13}\text{C}$  to enable synthesis of diamond from either. (\*) It has been postulated that isotopically pure diamond would be harder than natural diamond because of the reduction in crystal defects. This has been confirmed with  $^{12}\text{C}$  diamond and taken advantage of in diamond anvil high pressure cells(\*) which can achieve pressures greater than at the center of the earth. (5)

$^{12}\text{C}$  diamond is more easily made than the  $^{13}\text{C}$  diamond because of the greater abundance of the lighter isotope. Pure  $^{13}\text{C}$  diamond would be considerably harder yet because of the shorter bonds and higher density.

## YET HARDER MATERIALS

On theoretical grounds, it has been calculated that the cubic modification of boron nitride could be as hard as diamond and the so-far hypothetical material beta-carbon nitride may be harder than diamond in some forms “Keep tuned right here”.

## FOOTNOTES

1. (\*) I have starred items that could easily be expanded to result in a two or more page article for The Bulletin. And research for any one of these would suggest other topics for articles.
2. <http://en.wikipedia.org/wiki/Diamond>
3. [http://en.wikipedia.org/wiki/Material\\_properties\\_of\\_diamond](http://en.wikipedia.org/wiki/Material_properties_of_diamond)
4. [http://en.wikipedia.org/wiki/Isotopically\\_pure\\_diamond](http://en.wikipedia.org/wiki/Isotopically_pure_diamond)
5. <http://en.wikipedia.org/wiki/Graphite>
6. <http://www.google.com/patents/US5295402>
7. <http://books.google.com/books?id=gWg-rchM700C&pg=PA1291&lpg=PA1291&dq=hardness+of+isotopically+pure+diamond&source=bl&ots=xHJ8sFUBqi&sig=TIzLpes6gb384NU-vkcCelc8DWY&hl=en&sa=X&ei=TETSUf rgOOTB0AH4tYDYCQ&ved=0CEUQ6AEwBQ#v=onepage&q=hardness%20of%20isotopically%20pure%20diamond&f=false>
8. [http://en.wikipedia.org/wiki/Isotopes\\_of\\_carbon](http://en.wikipedia.org/wiki/Isotopes_of_carbon)
9. [http://en.wikipedia.org/wiki/Knoop\\_hardness\\_test](http://en.wikipedia.org/wiki/Knoop_hardness_test)

When I told my doctor I broke my leg in two places, he told me to stop going to those places.

## Uses Of Fluorite

Jody Dorman, member PCGMS

Fluorite has many industrial uses: as a flux in the manufacture of steel, in the production of hydrofluoric acid, and as a catalyst in the manufacture of high octane fuels. It is used in the manufacture of artificial cryolite for the refining of aluminum, lead, antimony, in the formation of opalescent glass, and in iron and steel enamelware. Clear optical-quality fluorite, with its low refractive index and low dispersion, is used for apochromatic lenses for microscopes, which eliminate distortion of color. Fluorite is also a source of fluorine which is used for the fluoridation of water and in Teflon coating where the fluorine helps to provide the "nonstick" surface on Teflon cooking pans. Powdered fluorite was added to water to relieve the symptoms associated with kidney disease.

source: Smithsonian Gem And Rock Book

## A Diamond is Forever

Now here is an interesting thought! Would you like your earthly remains incorporated into a gem that a loved one could wear and that could become a family heirloom? If you would, Algordonza head-quartered in Switzerland can turn your cremated ashes into a diamond. And as DeBeers has indelibly planted in our memory, "A Diamond is Forever".

Algordonza uses the same process as was developed by General Electric Co. back in the 1950s. The ashes are baked at just over 5,000o Fahrenheit to oxidize all the elements except carbon, which becomes graphite. It takes weeks! The graphite, together with a diamond seed crystal and a metallic catalyst is inserted in a core that is then placed in a diamond press. The core is subjected to about 2,500o F and 800,000 pounds per square inch of pressure; and, viola, you have a diamond. Lastly the stone is cut to shape and caratsize.

Are you interested? Just Google Algordonza (if you read French) or diamond ashes for sites in English. via Chips & Deposits May 2009 via El Gambrisona, June, 2011 Las Cruces, NM

## A SPECIAL PROGRAM

Texas A&M AgriLife agent Cindy VanDevender will present a program on hurricane preparedness at the July 18 club meeting.

Do you really know what you should take if you had to evacuate? A "grab-and-go" bag can serve you well for many kinds of emergency. She also demonstrates making a bead bracelet that teaches even very small children what essentials to remember to take. The "memory bead" idea is one we could adapt for children's programs as well. As each child strings a colored bead, you get to tell them what that bead represents.

## WHAT IS DEODORANT STONE?

Made of potassium alum sulfate and other mineral salts which are crystallized over a period of months. Called a natural body deodorant the Deodorant Stone actually inhibits bacterial growth on your body. This bacterial growth is what causes body odor.

The fragrance-free mineral salts works only on the surface of the skin, and do not clog pores. It does not alter the body's ability to eliminate toxins. To use as a deodorant, wet the stone and rub to underarms, much like you would a roll-on. Each stone will last many months. After use, rinse the stone in clean water and let dry.

Seen at Great South Gems and Minerals <http://www.greatsouth.net> via Rock Chip, 2013



Cartoon by Erston Barnhart in Rock Buster News 5/00  
via T-Town Rockhound 6/00