



PICK & SHOVEL

August 2015, Volume 57, Issue 12

Editor: Sharon Marburger

The purpose of this corporation shall be to study, promote an interest in, and disseminate knowledge of lapidary and various Earth Sciences including but not necessarily limited to Geology, Paleontology and Mineralogy. It shall be a particular purpose of the corporation to provide education in these fields to its members and the general public, especially to youth and student groups.

2015 Meetings and Activities

Board

Wed., Sep 2 (Lyman Residence)

Wed., Sep 30 (Oct) (TBD)

Wed., Nov 4 (TBD)

Wed., Dec 2 (Gere)

General

Summer Break from Business

Thurs., Sep. 17

Thurs., Oct 15
(Halloween Party)

Thurs., Nov 19
Annual Business Meeting

Sun., Dec 6
General Meeting,
Christmas Party,
Awards Ceremony

Activities

Roadside Clean-up
and Rock Party
September 26, 2015

Regular monthly meetings are held at 7:00 p.m. at the Bethany Park Shelter House. Youth activities begin at 6:00 p.m.

GENERAL MEETING

Summer Break!

MINERAL MONKEYS

Summer Break!



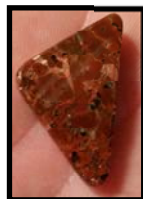
AUGUST BIRTHDAYS:

**Rowdy Cropp
Karen Messenger
Taylor Gerlach Suhr
Andrew Tiedje**



Rock Party August 22

Where you, too, can learn
to make beautiful items
like these!



The Jewelry Connection

5:00 p.m.

Bring your projects.
Bring your potluck item.

Be prepared
to have FUN!

Judith Bay &
Jayne Beer,
Hostesses

BOARD OF DIRECTORS

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ed20649@windstream.net

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pdr20@yahoo.com

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PRESIDENT'S MESSAGE

by Ed Dvorak

Is everyone enjoying the hot, humid weather? I am very spoiled; I do not think I could make it without air conditioning. I remember "way back when," it was hot but the humidity was much lower. It's the change of times; some things get better and some do not.

With summer in full swing with the heat, weeds, poison ivy, bugs, and so forth, now would be a good time to take inventory of your collection or go through old magazine to see what you have may have forgotten or missed. It never fails that I get back from a trip and the next Rock & Gem magazine has an article about where I had visited - and I missed it all! Oh well, next time.

If you do get out on a field trip, take plenty of water, to drink and to cool off with. Also, take your first aid kit containing bandages, rubbing alcohol and/or hydrogen peroxide, calamine, and an antihistamine (like Benadryl). The reaction to an unexpected bee sting or encounter with poison ivy can be headed off with early treatment. Your first aid kit should be a part of every outing, just like your water, walking stick, rock hammer, collecting bag, hat, and appropriate shoes.

Be safe and stay cool.



NOMINATING COMMITTEE

by Jim Marburger, Chairman

The first round of nominations will take place at the September General meeting. The Committee has not yet received any nominations for 2016 Officers, Board Members, or committee positions. Send your nominations to me, or any member of the Nominating Committee, prior to the September meeting. Members of the committee can be found on page 11 of any newsletter.

Nominations will be accepted from the floor at the September meeting, and again at the November meeting, immediately prior to the election.

If you have an interest in being nominated to the Board of Directors or filling a committee position, please let me know. According to the by-laws, you must be a member in good standing for a minimum of 12 months to be on the Board. You must have served on the Board for 12 months to be President.

INDIAN CENTER CELEBRATION

by Carolyn Ashmore

I want to tell you of a event coming up. The Indian Center's 46th Anniversary Celebration will be on August 14, 15, and 16 at 1100 St. Mary's Road here in Lincoln. I have been to several powwows and have enjoyed them greatly. They have food vendors as well as Native American jewelry on display and for sale. There is lots of dancing and drumming (a peaceful experience) and the costumes are awesome. Lawn chairs and cooler are recommended, although they do pass around cold bottled water.

I plan to attend the festivities on the 15th. Some other club members have expressed interest in attending, so I thought maybe some others might like to know about this.

This could be a great way to personally honor the memory of our own Mark Awakuni-Swetland, who passed away earlier this year.

2015 AWARDS

by Richard Peterson

The Awards Committee wants to remind everyone that our LGMC awards presentation program is in December as part of our Christmas potluck. The deadline for submission of nominees is September 30, which is the date of our October Board meeting. Get your nominations in early!

The nominations forms can be found on pages 9 and 10 of this newsletter. They may be submitted at any time, up to and including September 30, to me, Wooly, or Jim Marburger. The forms are also available on the website.

Don't miss out on the opportunity to enlarge your personal collection of specimens. The auction on August 8, 2015 at 11:00 a.m. in Onawa, Iowa will feature Wayne Gries' huge rock collection. Go to www.brockauction.com for more information.



Left: Ed Ridge demonstrating hole drilling in rocks

Below: Sharing of information (club members Ed R., Ed & Pat D., Corey, Jayne, Vera)



Left: Corey & Jayne demonstrating lapidary
Below: Corey explains about making a cabochon



GRINDING PARTY

by Karen Messenger & Sharon Marburger

Greetings to all! Thanks to the hardy group who showed up in spite of the horrible heat. The heat index as 105° to 110° F. with a heat warning from 1:00 to 8:00 p.m. Hot and sticky! That definitely affected attendance. Final numbers were 25 adults and 12 kids, totaling 37 attendees. The whole building attendance was not much better than our event total. Thanks to those who braved the heat! Karen M.

The 12th was a very hot July day. Pioneers Park was deserted. There were only seven cars at the picnic area that is usually crowded on a Sunday afternoon. It was kind of creepy, seeing the park deserted.

Only a few club members showed up to display and demonstrate. Charlie and Karen Messenger hosted the event on behalf of the Nature Center. Those displaying were Ed and Pat Dvorak, with Ed also demonstrating wire wrapping; Jim Marburger and Charles "Wooly" Wooldridge showed the two different ways to tumble polish stones and had free specimens for the kids; Ed Ridge displayed many different specimens, both rough and polished, and also demonstrated drilling holes in rocks; and Jayne Beer and Corey Beer demonstrated lapidary. Six other club members put in an appearance, but did not display or demonstrate.

It was obvious the high heat and humidity, along with the heat warning, kept the public from attending the event. It was unfortunate because the building was a comfortable cool with the air conditioning. Those who showed up had a good time, and were able to have plenty of one-on-one time with the presenters. Lots of questions were asked and answered. The hit of the event was Wooly's "pet" scorpion, found on a recent field trip.

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- ◆ Rough stones and fossils for the hobbyist
- ◆ Polished stone items for interior décor
- ◆ Great selection of tumble-polished stones

Open Tuesday thru Saturday
10 a.m. - 6 p.m.

PICNIC IN THE PARK

by Sharon Marburger

As mentioned in the Grinding Party article on page 3, it was a very hot and humid day - miserable, really. Those at the Grinding Party discussed whether we should have the picnic since it was so hot. The general consensus was that we brought food, so why not have the picnic?

At 4:00, Brian Beer cruised the park in search of a cool place to picnic. He found a lovely, shaded spot that wasn't too far to walk from the parking area. The breeze was nice, making it bearable to be outside.

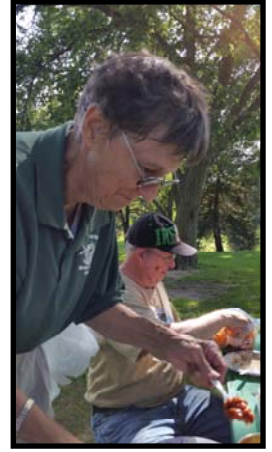
The bar-b-que grill was filled with charcoal and lit, food was spread out on the tables, and we munched on chips while we waited for the grill to reach optimum grilling potential. Steak, beans, spaghetti, Kentucky fried (and grilled) chicken, an assortment of chips, salads, and other yummy foods were available for eating. LGMC members know how to put out a spread of food!

We enjoyed visiting with one another, sharing stories of field trips and plans for the rest of the summer. It isn't a picnic without ants, so when they discovered us after 1½ hours, we decided it was time to pack up and leave.

Despite the weather, it was another fun time spent with fellow rockhounds.



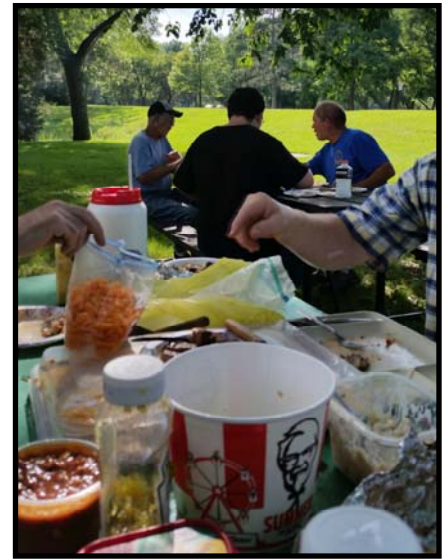
President Ed Dvorak reaches for some chips



Karen Messenger and Ed Ridge



Above: Jayne Beer



Right: Charlie Messenger, Brian Beer, and Corey Beer (and food!)

MY BEAUTIFUL ROCK

by Vivian Stockton, Northwest Arkansas Gem & Mineral Society

From: *Rock, Pick & Chisel*, 12/09
(2nd Place – AFMS Original Adult Articles)

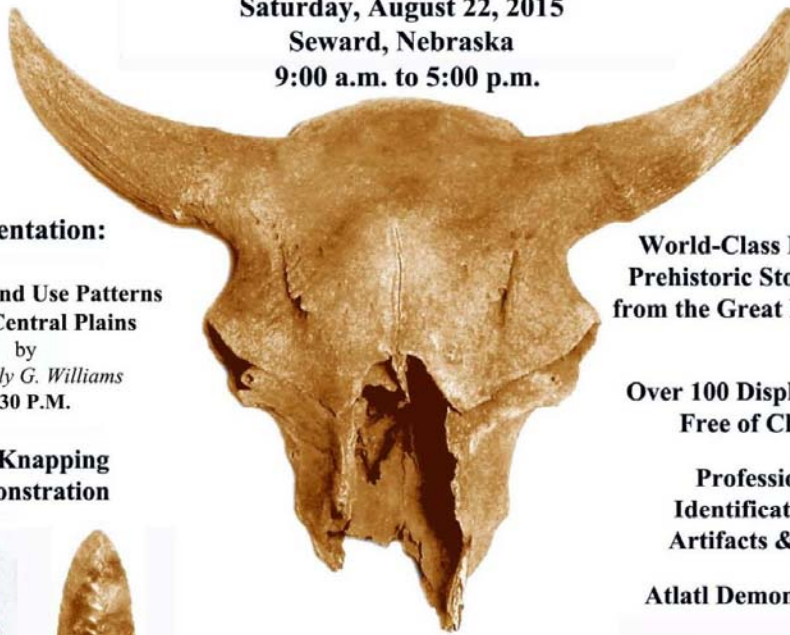
What a beautiful rock! It was an intense reddish color and sort of clear like a crystal. I saw it as I walked down the path to the bottomland along the Illinois River. I couldn't imagine how it could have lodged there on the hillside. It didn't fit with the limestone or flint rocks that were all over the place. It was rather heavy, but I carried it back up the hill and set it on my porch and admired my treasure each time I walked by.

Within a few days, my friend Donna came by on her way to Gentry to see club member Dean Shafer at his shop and have him identify a stone for her. She, too, admired my find, but had no idea what it was (other than some type of crystal) or why it was where it was found. She suggested that I bring the beauty along and see what Dean thought.

I was so excited. This was my first real find, other than just common ordinary rocks that I often picked up. Dean took the rock in his hands, stared at it for a minute. Then he shocked us by touching it with his tongue. He said only two words: Deer Salt!

11th Annual Nebraska Artifact Show

Seward County Fairgrounds – Harvest Hall
Saturday, August 22, 2015
Seward, Nebraska
9:00 a.m. to 5:00 p.m.



Presentation:

**Folsom Land Use Patterns
In the Central Plains**
by
Dr. Emily G. Williams
1:30 P.M.

Flint Knapping Demonstration



Adults \$3
Children 12 & Under Free
Bring the Family!
Concessions Available

World-Class Displays of
Prehistoric Stone Artifacts
from the Great Plains Region

Over 100 Display Tables
Free of Charge

Professional
Identification of
Artifacts & Bone

Atlatl Demonstration



The Nebraska Artifact Show
is a non-commercial show sponsored by
the Nebraska Archaeological Society.
No buying or selling of antiquities is permitted.



This event is for the exhibition of
authentic Native American
artifacts and related items.
No unlawful items will be allowed.

For more information
402-225-2525 or 402-423-5700
Exhibitor forms at: <http://sites.google.com/site/webnas>

Please send
articles,
features,
poetry,
reports,
and photos
of events
to the
editor!

The
Pick & Shovel
needs YOU!

J J & L Rocks & Minerals

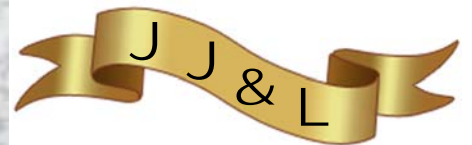
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MILLER INDICES: WHAT ARE THOSE NUMBERS ON CRYSTAL DRAWINGS?

by David Babulski, Georgia Mineral Society
From: Tips and Trips, 9/09
(3rd Place – AFMS Adult Articles Advanced)

When looking through books on mineralogy, do you ever wonder what those three numbers in parentheses, like this: (100), on crystal faces or in the description of crystals are supposed to represent? In this month's Micromount Corner I will try and explain in simple terms what those numbers are. We will not go into the mathematics of Miller Indices, but rather take a non-mathematical, simple case approach to what can be a rather esoteric, complex subject. So let's get started.

Every mineral crystal can be described as having three axes, usually labeled as a, b, and c. The hexagonal crystal system has four axes, but we will ignore that for now. To keep our discussion as simple as possible I will limit the discussion to isometric crystals. Figure 1 shows a simple cubic crystal with the three axes labeled as a and a-, b and b-, and c and c-. In this crystal system all the axes are equal length. This simplifies the mathematical aspect as we can see that each face of the cube crosses an axis at the same distance. For simplicity sake we will label that distance as 1 unit of distance.

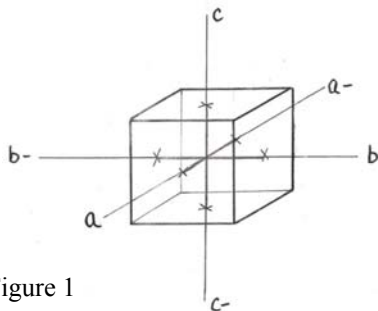


Figure 1

Notice that the "a" axis runs from front to back through the crystal, the "b" axis runs from left to right through the crystal, and the "c" axis runs vertically through the crystal. The minus sign on each axis just means it is on the "back side" of the crystal. Let's look at the top face of our cubic crystal.

As shown in Figure 2, the top face of our cubic crystal has been shaded in Magenta. Now suppose we extend that face out in every direction a bit as shown by the crosshatched portion.

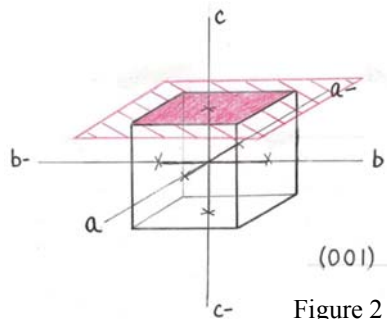


Figure 2

Notice, from Figure 2, that this crystal face crosses the "c" axis at 1 unit of distance but remains parallel to the "a" and "b" axes and if run out to

infinity would never cross these axes. Now a tidbit of information: Miller Indices are always listed in terms of the three crystal axes in the form: "a" first, "b" second and "c" third. So we can say that the top crystal face of our cubic crystal cuts the "c" axis at 1 and the "a" and "b" axes at infinity; we can show this symbolically as: $\infty \infty 1$. Well, infinity is a rather cumbersome number! So if we take the inverse of these three numbers we get: $0 \ 0 \ 1$. It is common practice to put the Miller Indices numbers in parentheses as shown in the bottom right of Figure 2.

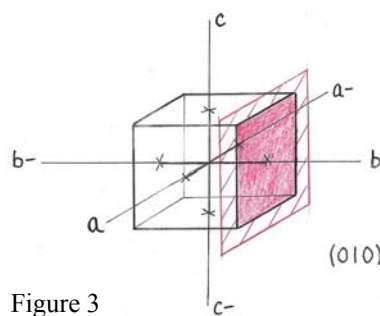


Figure 3

Let's look at another example. As shown in Figure 3, the right hand face of our cubic crystal, shaded in magenta, cuts the "b" axis at 1 unit of distance.

If we extend this crystal face out in every direction, as shown by the cross hatched portion, we see that it remains parallel to the "c" and "a" axes to infinity. So we can show this symbolically as: $\infty \ 1 \ \infty$. Again, taking the inverse of these numbers we get: $0 \ 1 \ 0$ or in common Miller Indices form: (010).

The next example shows what happens if a crystal face cuts one of the crystal axes on the back side of the crystal. Reference Figure 4.

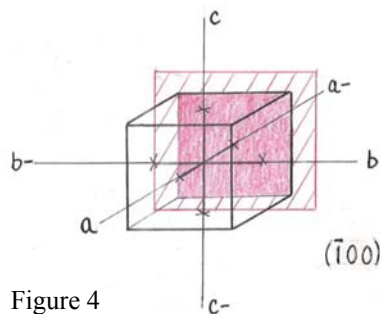


Figure 4

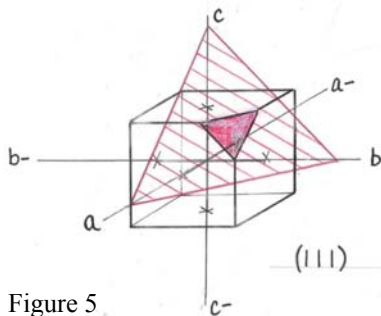
As shown in Figure 4, the back crystal face, shaded in magenta, cuts the "a" axis, at 1 unit of distance, on the back side. Note that the "a" axis is labeled with a minus sign to indicate it is the back side of the "a" axis. If we extend this crystal face out in every direction, as shown by the cross hatched portion, we see that it remains parallel to the "b" and "c" axes to infinity. So we can show this symbolically as: $-1 \ \infty \ \infty$. Now as before, if we take the inverse of these numbers we get: $-1 \ 0 \ 0$. In Miller Indices practice, the negative is indicated by a bar over the number 1, as shown in the lower right of Figure 4. This is pronounced as "bar one."

(Continued on page 7)

MILLER INDICES - CONTINUED

(Continued from page 6)

Suppose, instead of a face of the cube we have a corner face as shown, shaded in magenta, in Figure 5.



If we extend the edges of this triangular crystal face out in every direction we see it cuts all three axes at the same distance of 2 units.

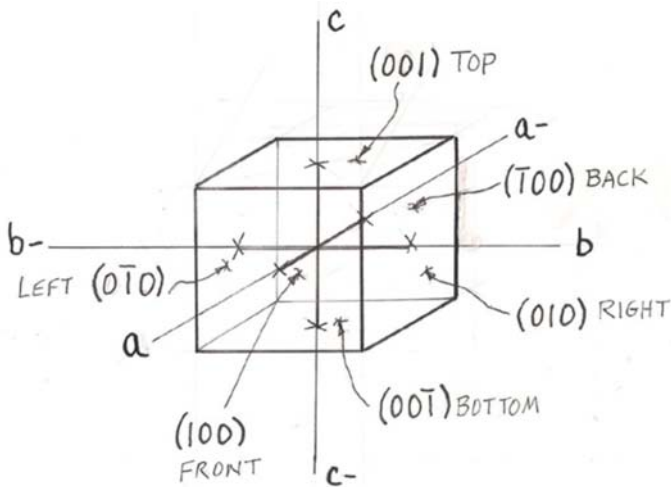
We can represent this symbolically as: 2 2 2.

Since the idea is to keep the numbers as small as possible we can divide through by the common factor to get 1 1 1. In Miller Indices format this would become (1 1 1), as shown in the lower right of Figure 5.

Figure 5

the numbers as small as possible we can divide through by the common factor to get 1 1 1. In Miller Indices format this would become (1 1 1), as shown in the lower right of Figure 5.

Figure 6 shows our cubic crystal with all the faces labeled with Miller Indices.



Notice in Figure 6 that the top and bottom faces are inverse of each other as are the right and left faces and front and back faces.

The subject of crystallography is a very complex one. I have tried to explain in simple terms about the Miller Indices for crystals. At this point, hopefully, you have a better idea of what those numbers in parentheses are in crystal drawings. From a micromounter perspective, it is often useful, when describing a crystal seen through the microscope, to use Miller Indices notation. If you would like to pursue this subject in more detail, you can check some of the useful references and additional reading below.

References:

Mason, B and Berry, L.G., Elements of Mineralogy. W.H. Freeman and Co., San Francisco, Pages 20 - 23

Smith, J.R., A Guide to Understanding Crystallography, Self Published; Jennie R. Smith, 1991, Pages 66 - 72

Dana, E.S. and Ford, W.E., Dana's textbook of Mineralogy, John Wiley and Sons, New York, 1966, Pages 43 - 67

http://www.tulane.edu/~sanelson/eens211/axial_ratios_parameters_miller_indices.htm

<http://www.chem.qmul.ac.uk/surfaces/scc/scat11b.htm>

<http://www.qly.uqa.edu/schroeder/qeol6550/millerindices.html>

<http://www.encyclopedia.com/doc/1Q13-Millerindices.html>

Until next time, may all your skies be blue and all your vugs be crystal filled.

Silversmithing classes

Tuesday Evenings
7:00 p.m. - 10:00 p.m.

The Jewelry Connection Ltd.
Indian Village Shopping Ctr.
13th & Arapahoe, Lincoln

Tuition: \$120 plus \$30 supply deposit

Session 4: Aug 11 - Sep 29

Session 5: Oct 6 - Nov 24

Contact:

Jayne Beer 402-890-3307

Judith Bay 402-423-7058

or e-mail

jbeer60070@aol.com

AFMS SHOW AND CONVENTION (AKA "NATIONAL SHOW")

DATE & TIME	WHATS HAPPENING	WHERE
Wednesday, October 21		
2pm	Uniform Rules Committee Meeting	AGMS Club House
1pm – 6pm	Early Registration Begins	AGMS Club House
6pm – 8pm	Social Hour – Drinks & Nibbles	AGMS Club House
Thursday, October 22		
8am	Move In Begins	Palmer Event Center
9am (1 - 4 hrs.)	AFMS Convention/ AFMS Delegates Meeting	PEC - Upstairs
After Delegates Meeting	AFMS Scholarship Foundation Meeting	PEC - Upstairs
2pm – 6pm	Registration Opens	PEC – Exhibit Hall
Friday, October 23		
9am	Gem Capers Opens	PEC – Exhibit Hall
10am (1 – 2 hrs.)	Judges & Clerks Meeting	PEC – Upstairs
11am (1 – 2 hrs.)	S.C.R.I.B.E. Meeting	PEC – Upstairs
10am – noon	AFMS Officers' Luncheon with Auction	TBD
1pm	SCFMS Judging Begins	PEC – Exhibit Hall
6pm	Show Closes	PEC – Exhibit Hall
Saturday, October 24		
8am – 10am	SCFMS / AFMS Editors Breakfast	PEC – Upstairs
8:30am	Judges & Clerks Meeting	PEC – Upstairs
9am	Gem Capers Opens	PEC – Exhibit Hall
9am	AFMS Judging Begins	PEC – Exhibit Hall
1pm (1 - 3 hrs.)	SCFMS Convention/ SCFMS Delegates Meeting	PEC – Upstairs
After Delegates Meeting	ALAA Annual Meeting	PEC – Upstairs
3pm	Judges & Exhibitors - Arbitration Meeting	PEC – Upstairs
6pm	Show Closes	PEC – Exhibit Hall
6:30pm	Social Hour – Cash Bar	PEC – Upstairs
7pm	SCFMS / AFMS Awards Banquet	PEC – Upstairs
Sunday, October 24		
??	Field Trip to Emerald Ridge	TEXAS
10am	Gem Capers Opens	PEC – Exhibit Hall
5pm	Show Closes	PEC – Exhibit Hall

Austin, Texas
Austin Gem and Mineral Society's
Annual Gem and Mineral Show

GEM CAPERS 2015



This years theme is PEGMATITES

Rocks ~ Gems ~ Minerals ~ Fossils ~ Jewelry ~
Beads ~ Exhibits ~ Children's Activities ~
Live Demonstrations
Over 30 dealers participating!

Palmer Events Center
900 Barton Springs Road
Austin, Texas

Admission
Adults: \$8;
Seniors: \$7;
Ages 13 – 18: \$2
Ages 12 & under
proudly sponsored by: SILICON LABS

The Kids will enjoy:

- ◆ Wheel of Fortune cost is only \$1.00 for a spin of the wheel – every spin is a winner!
- ◆ Gem Mine cost is only \$1.00 for a two minute hunt for polished rocks in our mine – best value in Austin!
- ◆ Jewelry Making - Take your find from the Gem Mine and have it turned into a lovely piece of jewelry. All for only \$1.00!
- ◆ Illumination Station - For \$.50 you can tour our display of fluorescent rocks and minerals. See if you can guess what changes will happen!
- ◆ Touch Table Imagine a table full of rocks and minerals that YOU CAN TOUCH. That's right, a table full of rocks and minerals that can be touched, and a volunteer ready to answer any questions you might have. And this event is free. Stop on by!

LGMC, Inc. AWARDS NOMINATION FORM

The Lincoln Gem and Mineral Club, Inc. Board of Directors encourages all individual members to utilize this Nomination Form to recognize club members who have made outstanding contributions to the club. Let's show our appreciation to that special person who goes out of the way to make the club the best it can be!

RULES:

- ◆ Nominate as many deserving club members as you like.
- ◆ One nomination per form.
- ◆ Write a brief description of how your nominee has made outstanding contributions to LGMC. Submit the strongest case possible. Form should be organized and easy to evaluate. An additional sheet may be attached if more space is needed.
- ◆ Submit the Nomination Form to the Awards Committee by **September 30**.
- ◆ The Awards Committee will evaluate the nominations, and forward the acceptable Nomination Forms to the Board of Directors, which will select finalists at its November Board meeting.
- ◆ Each finalist will be honored at the annual Christmas Party in December.

AWARDS DEFINITIONS:

- The LGMC Rockhound of the Year Award is to honor an individual (or a couple) who has shown outstanding service during the past year (October through September).
- The LGMC Service Award is to honor an individual who has made outstanding contributions during his/her entire membership.

Check **one** of the following nomination categories:

- _____ **“RockHound” of the YEAR**
- _____ **10 YEAR SERVICE AWARD**
- _____ **20 YEAR SERVICE AWARD**
- _____ **30 YEAR SERVICE AWARD**
- _____ **40 YEAR SERVICE AWARD**
- _____ **SPECIAL AWARD (to be named)**_____

1. Name of Nominated Person:

2. Address of Nominated Person:

3. Individual's Contributions to LGMC: *(See the criteria list on page 2 of this form for service categories to be considered for this award)*

4. State examples of how this individual educates others about the Earth Sciences associated with Rockhounding:

5. State examples that this individual observes & promotes the American Federation of Mineralogical Societies "Code of Ethics":

6. Summarize why this individual is being nominated as recipient of an award

Person Nominating the above individual:

Name:

Phone:

E-mail:

Return this form no later than September 30 to:

Richard Peterson, padr20@yahoo.com, 2720 S. 74th St., Lincoln 68506;
Charles Wooldridge, charles.wooldridge@nebraska.gov, 6115 Huntington, Lincoln 68507; or
James Marburger, jm24122@windstream.net, Box 64, Hickman 68372

SUGGESTED CATEGORIES:

- Serve as an LGMC officer*
- Serve as an LGMC Board member*
- Serve on the Show committee*
- Serve on the Swap committee*
- Serve on a standing committee*
- Serve as a delegate to the MWF or NAES*
- Attend LGMC monthly meetings*
- Attend a club sanctioned field trip*
- Attend meetings of another rock club*
- Attend other Gem & Mineral shows*
- Bring items to show at monthly meetings*
- Promote and support Juniors' activities*
- Present a program at a monthly meeting*
- Demonstrate at a monthly meeting*

- Donate to the silent auction*
- Present a program at an annual show*
- Participate at Geology Day*
- Participate at School event*
- Participate at Science Fair*
- Participate at Scouting Events*
- Participate at the Grinding Party*
- Participate in Adopt-a-Highway*
- Present a talk to an outside group*
- Host a monthly rock party*
- Publish article or feature in the newsletter*
- Publish article or feature in another newsletter*
- Plan a club field trip*
- Any Other Activities to promote our hobby and club*

STANDING COMMITTEES CHAIRMEN

Audit	Ed Dvorak James Marburger Roger Pittard
Christmas Party	Edward Ridge
Education / Librarian	Charles Wooldridge
Facebook	Andrew Tiedje
Field Trips	James Marburger
Geology Day Coordinator	Charles Wooldridge
Grinding Party Coordinator	Charles Wooldridge
Historian	Sharon Marburger
Legislative Liaison	Susy McMahan
Membership Record	Edward Ridge
MWF Liaison	Vera Lyman
Programs	Jayne Beer
Property	James Marburger
Refreshments / Door Prizes	Vera Lyman
Roadside Clean-up	James Marburger
Scholarship	Vera Lyman
Show—2016	Ed Dvorak
Swap—2016	Jayne Beer
Website	Jim & Sharon Marburger
Youth Activities	Carolyn Ashmore Susy McMahan

LONG RANGE PLANNING & BY-LAWS COMMITTEE

Jim Marburger, Chairman

1 year:	Vera Lyman Ed Dvorak
2 years:	Edward Ridge Robert Cropp
3 years:	Charles Wooldridge Sharon Marburger

NOMINATING COMMITTEE

Jim Marburger, Chairman

1 year:	Brad Nielsen Roger Pittard
2 years:	Vera Lyman Edward Ridge
3 years:	Robert Gritmit Sharon Marburger

ADVERTISING, SUBSCRIPTION, AND MEMBERSHIP INFORMATION

Advertising by rock / hobby business or interest is permitted with the approval of the Board of Directors. Contact the Editor with your proposed ad. The rate is set at \$20.00 per full page; \$10.00 per 1/2 page; \$5.00 per 1/4 page (minimum) per issue, paid in advance to the Club treasurer. Ads will be placed throughout the newsletter as space permits.

Subscription to the Pick & Shovel is \$15.00 per year for mailed copy.

Membership dues for the Lincoln Gem & Mineral Club are as follows:

- Adults (age 16 and over) - \$15 per year or \$25 per couple (within the same household)
- Juniors - \$2 per year (with a responsible adult)

All new memberships must be accompanied by a written application. Prospective members must gain Board approval and attend one regular meeting before being approved for membership.

2016 SHOW COMMITTEE

- Chairman:..... Ed Dvorak
- Breakfast: Vera Lyman
- Dealers: Charles Wooldridge
- Demonstrators:..... Carrie Burkhardt
- Displays: Jayne Beer, Ed Ridge
- Event Center Liaison..... Vera Lyman
- Finance & Ticket Sales: Jim Atkins, Vera Lyman
- Floor Chairman:
- Forms Sharon Marburger
- LGMC Club Booth:
- Nebraska Gem Dig:..... Charles Wooldridge
- Plants:.....Ed Ridge
- Printed Program: Sharon Marburger
- Publicity & Promotion:Jim Marburger
- Ribbons & Recognitions:..... Sharon Marburger
- Security: Vera Lyman
- Show Flyer Sharon Marburger
- Silent Auction: Andrew Tiedje
- Special Features:
- Web Master:..... Jim & Sharon Marburger
- Youth Activities:..... Carolyn Ashmore
Susy McMahan

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PICK & SHOVEL

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