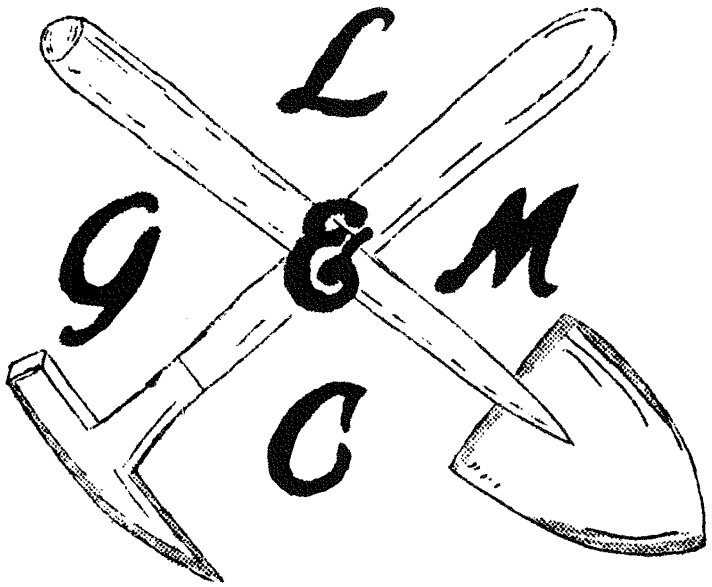
Nov. 1964

THE PICK & SHOVEL



MONTHLY BULLETIN OF THE

LINCOLN GEM AND MINERAL CLUB, INC.

LINCOLN, NEBRASKA

LINCOLN GEM AND MINERAL CLUB, INC.

OFFICERS AND APPOINTMENTS

President	Thomas Simmons 2970 South Street
First Vice-President	Everett Weber 5310 Colby Street
Second Vice-President	Bruce Simon 3922 South 20th St.
Recording Secretary	Mrs. Phyllis Parks 3510 Everett Street
Treasurer	James Parks 3510 Everett Street
Corresponding Secretary	Mrs. Dorothy Engelhart 4130 Witherbee Blvd.
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Affiliated with:

Midwest Federation of Mineralogical and Geological Societies

American Federation of Mineralogical Societies

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Lincoln, Nebraska 68507

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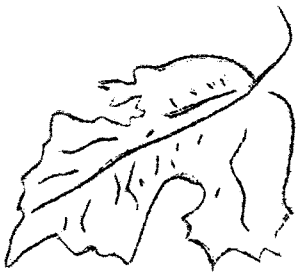
A Rockhounds Prayer

As we wander over hill and dale
By stream, through rain and snow and hail,
Looking for the precious stone
Perhaps fossil, wood or petrified bone,
Let us think of the Maker whose toil
Placed these rocks in the virgin soil.
Were it not for Him, our hammers rust
No gold to find or geodes bust
Now, as the hills and dales we trod
Think of but one, and that is GOD.

We search our lives for pebbles rare
To stake a claim, who knows where,
Let's give our thanks to Him whose hand
Has built the mountains, sea and land
For were it not for Him above
Whose creation of earth was done with love,
We would not have our field and stream
To find the things in a rockhound's dream
So think not of stone as a thing to hoard
But as gifts presented by our LORD.

James P. Eich
(Fox Rox.News)



THE PRESIDENT'S PAGE

November, a month which gives us a festive holiday to enjoy but also an important meeting of The Lincoln Gem and Mineral Club will take place. Our annual election of officers will be the business for the evening. Published in this month's bulletin are the names submitted by your nominating committee. Study these candidates and be prepared to cast your vote. Nominations may be made from the floor after the nominating committee make their report. The importance of this meeting need not be mentioned as you club members know. I sincerely hope that all members will attend this meeting. Remember <u>your vote counts</u>.

Your club project "Plesiosaurs" is progressing well. Many members have been out to the site and have put in hours digging this giant reptile. Many more will be needed before we are through. An article on this project is included in this bulletin. Anyone wishing to work contact your Field Trip Chairman, Gene Eno.

The Anthony Gem and Mineral Society will hold their 3rd annual show on November 28 and 29, 1964. It will be held at the Anthony Municipal Hall, Anthony, Kansas. The hours will be from 1 P.M. to 9 P.M. Saturday and from 10 A.M. to 5 P.M. Sunday. This show is open to all wishing to exhibit. Entry forms for this show may be had by contacting Dorothy Engelhart.

You will be asked at the next meeting if you want the Annual Christmas Pot Luck Dinner this year. We have always had fun at this festive dinner and if we are going to continue this year, as we have in the past, arrangements must be made. Suitable meeting quarters may be had for Saturday, December 19th. Think this over and be ready to cast your vote.

Thomas Simmons
President

SATURDAY - NOVEMBER 28, 1964

Regular meeting - 7:30 P. M.

Roberts Dairy Party Room
211 South 20th Street

PROGRAM

Helena Baegl will show slides

Study - "Mineral of the Month" - TOPAZ - (See following page)

* * *

REFRESHMENT COMMITTEE

Mr. and Mrs. Irl Everett Mr. and Mrs. Jim Parks

Adeline Nolde

* * *

ROCKY MOUNTAIN FEDERATION SHOW

Since the Rocky Mountain Federation Show for 1965, will be held at Wichita, Kansas, we are giving it an advance billing. This show will be June 11, 12, and 13, 1965 at the Broadview Hotel.

There will be 18,000 square feet of air conditioned exhibit space on the ground floor, with extra rooms for programs and for the House of Delegates meeting, and a snack bar along with the coffee shop and restaurant facilities of the Broadview Hotel.

At the show there will be competitive and non-competitive exhibit space. The AFMS rules will be used for the competitive show judging. Also being featured at the show will be displays of the Tri-State mining area--beautiful mineral specimens, memorabilia of the early mining days of the area.

As the show is to be held at Wichita this will be an excellent opportunity for those club members who've never seen a Rocky Mountain Federation Show to do so.

TOPAZ
Mineral of the Month

The golden brown of the autumn leaves is held in the Topaz, which is the birthstone for November. A legend suggests that the name topaz came from the name "Topazein", meaning "to seek" because the first locality in which it was found was an island Topazas, in the Red Sea, which was often surrounded by fog and difficult for sailors to find. It was supposed to have the power of giving out light, and it has always been the symbol of friendship.

There still remains the tendancy of less enlightened to call all clear yellow stones topaz, particularly the transparent yellow quartz which is properly known as citrine. Contrary to the general idea, topaz is usually colorless or very pale in tint. Yellow hues of different degrees, from pale to a bright cherry tint are common, and the pale blue and pale green stones are often mistaken for aquamarine and are far from rare.

The hardness of topaz is exceeded by only four other gem minerals. For this reason it takes a beautiful polish. It's toughness is not pronounced and when dropped upon a hard surface may be damaged.

Many gem lovers and collectors admire the soft beauty of the topaz above all other gems. It has a rare velvety body appearance which fascinates its admirers, and its wide range of pale colors offers a charming selection of birthstones to those born in November. When highly polished it has an interesting slippery feeling and when rubbed has the ability - like amber - to pick up pieces of paper.

* * *

NOMINATING COMMITTEE REPORT

This report was submitted by your nominating committee which consists of Chairman Roger Pabian, Members Gene Eno and Irl Everett. The following members have indicated their willingness to serve as your 1965 Officers if elected:

President . . . . . Everett Weber

1st Vice President. . . . . Bruce Simon

2nd Vice President. . . . . Howard Taylor

Recording Secretary . . . . Miriam Forbes

Treasurer . . . . . Lloyd Lederer

Nominations from the floor are encouraged as all members wishing to serve should have an opportunity to do so. HOWEVER --PLEASE OBTAIN PERMISSION from your nominee before placing his or her name before the membership.

SIMMON'S RENTAL & LAPIDARY SHOP

PORTA PERK

Like your coffee hot? No need to carry coffee in a thermos when you own the new Porta Perk. It's small, easy to carry and makes up to four cups of coffee in about seven minutes. Ideal for camping and field trips. Why not order one now for Christmas?

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Prospect once and get all the minerals that fluoresce. A giant 7" filter with an unbreakable all metal housing. No light leaks to worry about. Get ready Now for those Christmas presents and put in your order for a new LODESTAR.

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ADVERTISEMENT

First Report Of The "Monster Diggers" !!

As most of you know by now the club is involved in a project jokingly referred to by some as the "Monster Dig." It started as the result of my wish to cap the year's field trips with something a wee bit different. Some time ago Roger Pabian had mentioned he knew where a sea lizard was located. It seems as if three fellows, Hal DeGraw of the Nebraska Geological Survey, Charles Osborne of the Bureau of Reclamation, and Phil Emory of the United States Geological Survey had spotted whatever it was eroding out of an outcrop exposed by the channel of Oak Creek, north and west of Valparaiso, Nebraska, while they were on a routine survey. Roger, who had been to the site a time or two was concerned about part of it being lost down the creek when more erosion took place. He said that the find had been reported to the Museum but that they currently had no funds which they could devote to collecting it. We both agreed that something should be done before the spring floods took their toll.

Our first step was to find out for sure that it really was something that the Museum wanted. An appointment was set up with Dr. C. Bertrand Schultz, Curator of the Nebraska State Museum, to inspect the find more closely. Roger, Dr. Schultz and myself piled in my car one evening about 5:15 and took a flying trip to Valparaiso. By exceeding the speed limit a bit and doing some Olympic type cross country walking for about half a mile we managed to arrive at the site while it was still light enough to keep us from falling into the creek. We might have made it a wee bit sooner but Dr. Schultz had to stop and admire the beautiful moon which was rising. Anyway, by the light of the moon and with the aid of a small torch made from an envelope which I had in my pocket, we were able to get a good look at the lizard or whatever it was. Dr. Schultz said he felt that it was a mosasaurs or a plesiosaurs and leaned a little bit toward the latter because of the size of the vertebrae. Whatever it was he wanted it, so on the way home we agreed that if the Museum would furnish someone to supervise the collection and the incidental material involved and that our Lincoln Gem and Mineral Club would provide the labor.

The following Saturday, October 24th, Velma Bloyd, Dorothy Engelhart and myself picked up Larry Martin, the Museum staff member Dr. Schultz assigned to baby sit with us. Armed with picks, shovels, knives, ice picks, burlap, plaster and shellac, we headed for the site. On the way we met Larry Pope and Joana Baughers and were joined later by Ray Sincebaugh who was to be the official trip photographer.

The first afternoon we exposed several vertebrae, a flipper and a line of small bones which ran along the bank for about 12 feet. The digging at this point was fairly easy. The monster was in a Graneros Shale formation, the lower part colored gray, the upper part which had weathered more was a yellow clay color. This formation was formed at the bottom of a Cretaceous age sea which meant that our monster was around 120 million years old, give or take a couple

FIRST REPORT OF THE "MONSTER DIGGERS"
(continued)

of days. The shale also had many other fossil remnants. Oyster shell, fish scale, bones, and shark teeth were found all through it. In fact as a bonus we uncovered about two or three feet of a fish. This was just the tail section. From the size of the tail it was estimated that had we gotten the whole fish it would have been 8 feet or more long. This shale is fairly soft and parts readily along bedding planes which was a good break for the diggers.

The first afternoon we prepared three casts for removal to the Museum labs for further preparation. The whole idea of the collecting in the field is to get what you are collecting back in the best condition possible. To do this the exposed specimen and surrounding matrix is placed in a plaster cast much like a doctor puts a plaster cast on a broken bone.

Let me digress a little from the narrative and describe the process of casting and removing a specimen. First of course the bone is exposed. This is done carefully, usually with the aid of small instruments like scalpels, ice picks, brushes, etc. Then the exposed bone is given a coat of alcohol and shellac as a preservative. Once this is dry a coat of damp tissue paper, we used the kind that comes in rolls, is placed over the bone to prevent it from getting plaster all over it and to fill in low spots or holes so the cast will bond tight with no air spaces for things to rattle around in inside. This is then covered with a cast made of plaster soaked burlap strips. This cast is formed completely around the bone and surrounding matrix which has been cut out on all sides and undercut at the bottom as far as it can be done without disturbing the matrix above. If a cast is any length reinforcing is built in by the use of a piece of board or broomstick. Once the plaster has hardened the cast is further undercut and finally broken loose by breaking the matrix across the bottom. At least you hope that's where it breaks. So far all of our casts have been very cooperative and broken out like we wanted but I'm told that it doesn't always happen that way. Once broken loose the cast is immediately turned over on its top. This is to prevent the bone and matrix from falling out the bottom in a pile of matrix and bone. If this happens needless to say the specimen doesn't reach the lab in very good condition.

After announcing the project to the general membership at the meeting Saturday evening we had a number of diggers on site Sunday afternoon. We also had a number of sightseers from the surrounding area. Digging progressed well and a cast was placed on the exposed flipper. Lloyd Tanner, Assistant Curator at the Museum gave it a tentative identification as a plesiosaurs. Things took a turn for more work however as the line of vertebrae we were uncovering took a turn into the bank where it was covered by about 8 feet of overburden.

Tuesday afternoon the University publicity department visited the site and made pictures to release in conjunction with their news release. It is a little difficult to keep something like this a secret with so many people involved, so Dr. Schultz decided to

FIRST REPORT OF THE "MONSTER DIGGERS" (continued)

release the information. As many of you know it appeared in The Lincoln Star, Omaha World Herald, on television and I understand will by now have appeared in The Lincoln Sun. This is more publicity than we get even when we pay for it.

The following week end all exposed bone was cast and removed to the lab and a lot of the overburden removed. An interesting bit of speculation was brought forth Sunday. We had been under the impression that we were following the neck of the specimen. Due to the absence of any ribs so far and the fact that the vertebral processes were fairly large it was suggested that maybe we were actually only about at the middle. This could be good news and bad news combined. Since these critters can be up to 50 feet long that would give us a long ways to go. It would mean however that we might recover a much larger percentage of the specimen. Since the only previous material of this type found in Nebraska was a flipper and several vertebrae at a quarry near Garland several years ago this prospect doesn't make the Museum mad at all.

Many questions have been asked about our monster. What is it? What did it look like? How old was it?

It has been tentatively identified as a plesiosaurs. This is a marine reptile of the dinosaur class, about fifty feet long. It lived about 120 million years ago in the Cretaceous Period living on the fish in the sea. I have heard two descriptions of it. One says it looks like a seal with a head and neck of an ostrich. The other says it looks like a cross between a snake and a turtle without a shell. In any event 120 million years is long enough for it to lie where it is. It is time it reposed where the Museum can take a closer look at it.

Like the song says that I remember from Snow White & the Seven Dwarfs, "Its dig, dig dig dig, dig dig dig dig, all the whole day through. Well last week we got tired of making like the seven dwarfs and called in some mechanical aid in the form of a front end loader. There was a little doubt for a while if we would get it in in one piece due to the hill on one side being so steep and the creek bank on the other being so deep. But get it in we did. In short order it accomplished what it would have taken our industrious group several week ends.

This week end we uncovered eithteen more vertebrae. Ten have been cast and removed, the rest cast but not removed. Each additional vertebra exposed seems to confirm the theory that we are still in the body section. Since statements concerning the length of neck which could be up to 20 feet have been floating around and since we have about 30 feet uncovered already and still seem to be in the body it gives rise to conjecture that we might have a record size on our hands. I haven't verified the statement but have been told that the longest on record is fifty some feet. Each additional foot we uncover puts us further toward the record class.

We have had some casualties and hurts crop up. There have been the usual blisters and aching muscles and a couple of ankle strains

FIRST REPORT OF THE "MONSTER DIGGERS" (continued)

but the one which causes people to blink happened to Dorothy Engelhart Sunday. She got bit by a monkey. No that isn't a misprint. One of the spectators had a small squirrel monkey along. It seems it isn't used to crowds. Dorothy said it was scampering to her for safety when it happened. It wasn't serious but who else can say they got bit by a monkey while excavating a plesiousaurs.

Incidentally, Dorothy has been doing a fine job of holding the crowd on the other side of the creek. I use the word crowd advisedly. I've seen high school football games played before less people. They come from all over and are all sizes and ages. They are filled with curiousity and ask many questions about our "find."

Our outcrop continues to provide bonus finds. Sunday Larry Martin and Bob Eisele from the Museum took home a bone they suspect belonged to a Pterodactyl. Thats a flying reptile. This area continues to amaze us with the things it contains.

I'll see you at the diggings.

---Gene Eno, Reporter

* * *

Are You A Cave Man??

A hundred years ago, geologists knew of only 50 caves in the United States. Today they know of more than 5,000. Knowledge of caves is increasing all the time. How much do you know?

1. Which speleothems (cave formations) seem to defy the law of gravity?
   a. Stalactites
   b. Stalagmites
   c. Helictites

2. Most of the world's important caves are found in:
   a. Sandstone
   b. Limestone
   c. Shale

3. You may be in danger if you build a fire in a cave because you might:
   a. Be overcome by carbon monoxide
   b. Start a fire in a coal seam
   c. Cause the roof to fall in

4. Where is the world's highest known cave?
   a. Spain
   b. Switzerland
   c. U. S. A. (Colorado)

5. The first sightless cave animals discovered, blind fish - found in Echo River, Mammoth Cave, Kentucky - are blind because:
   a. The species never had any eye structure
   b. Their ancestors lost their eyes through disuse
   c. Minerals in the waters of the cave have destroyed the eyesight of these fish.

6. A good caver doesn't disturb bats he finds hibernating in caves because they may:
   a. Get in his hair
   b. Bite him
   c. Die if awakened

7. If you should discover a new cave, your first step should be to:
   a. Smoke the letters N.S.S. (National Speleological Society,) near the entrance
   b. Smoke your own initials and the date of entry near the entrance
   c. File a claim at the nearest U. S. Post Office

8. Where is there a "sea cave" in a desert in the United States?
   a. Arizona
   b. Utah
   c. Southern California

9. If you should find bones or Indian relics in a cave floor you'd be well-advised to:
   a. Leave them where they are
   b. Dig them out and save them for the Natural History Museum
   c. Send them registered mail to the Dept. of the Interior in Washington, D. C.

10. A "dead" cave is one in which:
    a. Stalactites and stalagmites glisten
    b. Water seeps or drips from the walls and ceilings
    c. Rimstone is soft and flaky

Mark your answers then check them on the back page of your bulletin.

By - John and Molly Daugherty
Via Science Digest

No November meeting

Chairman . . . Judy Weber Sponsor . . .Mrs. Velma Bloyd

This page in your monthly bulletin will be reserved for the Junior Members. As you will note above, your chairman's name, when and where your meetings will take place and your sponsor for the Junior Membership Program. Since the months November and December are usually set aside for the festive holidays, our meetings will start in the month of January.

From time to time, this page will be used to tell you of materials you will need to bring, or to let the adult members know what you are working on.

As this is a new and experimental group we have no set plan. We are still in the formative stage. If you have a preference of projects to start on think them over and bring to January meeting.

Your meeting will be scheduled as the regular club meetings are, September through May. We are omitting the summer months so you may enjoy field trips and vacations.

As with the adult group, we too shall have a new chairman January 1st. His or her name will be in your December bulletin.

* * *

ROCKY NUGGETS

What have the rockhounds been doing this month? Well here is a partial list of those who have been at the "Monster Diggings" armed with shovels, picks, knives, icepicks, spoons, garden hoe, scalpel, fingers, and some with muscles (aching or otherwise). From the University we had Larry Martin, Lloyd Tanner, Bob Eisele, and Dr. C. Bertrand Schultz. From the club Gene Eno-Velma and Cliff Bloyd-Norma, Randy, and Leslie Miller-Clyde and Helen Miller-Marge and Garry Heedick-Larry Pope-Joane, Lloyd and Louise Baugher-Roger Pabian-Frank Rule-Kathryn and Ralph Ulrich-Mr. C. Ray Waddle-Dale Bower-Miriam Forbes-Jim and Phyllis Parks-Ray and Dorothy Sincebaugh-Tom Simmons-Todd Ashmun-Glen and David Lyman-Charles Anderson-Maurice and Frances Tracy-Chris, Norman and Dot Engelhart-. Hope we didn't forget anyone. Now all of us can say we helped dig up "Pleasy". We still have lots more digging to do so sharpen up your tools and muscles and come on out. Call Gene Eno for directions or ask somewhere in Valparaiso for the route to Adolph Rezac's as many of the people in that area have been out to the site to see how the project is coming.

Leslie Miller sure has been a fine worker and example for the Junior Members and we liked his idea about the "Hoe."

Garry found a rock that interested Larry Martin, Rezac's nephew found a tooth and small piece of jaw bone so may have caught rockpox like the rest of us.

The A. O. Beckmens have left the state headed for Arizona. Hope we hear from them soon for they are sure to do some rock-hunting on the way there.

The Waddles just returned from a three week vacation. The Claus just returned from a leisurely trip back from the east. Helena Baegl had a wonderful trip as we see from her memo printed elsewhere in this bulletin.

Tom Simmons went to hunt deer but bet he came back with Fairburns as a birdie told that the deer was in the locker and the trailer parked at Fort Robinson before he came back. How about it, Mr. President?

The Visual Aid cases will be used in a nature study group at Union College this week.

Call me or I will be calling you.

Dorothy Engelhart
Reporter

Memo from Helena Baegl, 11/10/64

My vacation was about perfect- went directly to Redmond, Oregon, to visit a cousin whose husband is a dedicated rock hound. He is retired and devotes countless hours per week making beautiful slab coffee tables, step tables, clocks, etc., in his well equipped shop. We went out one day about 40 miles from Redmond to dig for limb castings, as they find many very beautiful ones in that vicinity- but they were also in need of rain and my soft city muscles were not equal to digging in the hard earth for very long- so I didn't have much luck, but my cousin found a couple of small ones which he gave me. They find heavenly blue limb castings out there, but I was not fortunate to obtain one, not even by purchase. I still have hopes one will come along in the mail some day, though! I visited a number of fabulously beautiful collections of cabachons, specimens, etc., but they are loathe to sell the nice stuff. I shouldn't complain however, as came home with about 50 pounds of rocks and slabs which my cousin and his rock friends plied me with- beautiful dark green jasper from that locality, Priday plume agate, any number of kinds of obsidian, of which there is much in that country, and lots of others. We had a 2-day trip up to Mt. Hood, Portland, and Vancouver, Washington. Spent several days on the way home at Caldwell, Idaho, and acquired more rocks and slabs. I understand Northern Idaho is full of wonders for the rock hound- Idaho is called the Gem State, and I want to go back there soon. In all fairness, should say there are other attractions out there, even to a rock hound, namely: the gorgeous flowers, especially the fuchsias- and nuts and fruits, particularly luscious huckleberry pie! Idaho, Oregon- here I come again!

Helena

* * *

ARE YOU A CAVE MAN?
(answers to quiz)

1. c - Helictites are grotesque stony formations that curl and twist in various contortions.

2. b - Limestone is composed of the mineral calcite, a carbonate of calcium. The natural waters of the earth may contain carbon dioxide. The action of the weak acid, carbonic acid, formed when carbon dioxide is present in water, changes the calcium carbonate to calcium bicarbonate, which is very soluble. Through this process the limestone is eaten away over a long period of time and a cave is produced.

   a - Fire uses up a considerable supply of oxygen so that in close quarters the air supply may be used up and carbon monoxide may develop.

4. a - In the Pyrenees Mountains in Spain, the Grotto Casteret is about 9,000 feet in altitude.

5. b - During one of the great glacial periods, their ancestors were trapped in Mammoth Cave when the water receded. After countless generations, their eyes, being useless, disappeared.

6. c - Hibernating bats maintain a temperature just a little higher than that of the cave. When they're awakened, their bodies use their stored fat up quickly to warm up. When their energy supply is depleted by their having been awakened in the wrong season, they starve to death as there are no insects around in winter.

7. a - N. S. S. smoked near the entrance lets other cavers that may follow you know that you are recording the cave in the files of the N. S. S. Don't smoke your own name.

8. b - Sea caves are formed by the wave action of water. Salt Lake is all that is left of Lake Bonneville and Clinton Cave in Utah is formed in limestone by the force of wave action.

9. a - You have to be a member of a recognized research team to collect mineral or animal specimens in a cave.

10. c - A cave is "dead" when water seepage stops. Crystalline formations lose the water of hydration and become flaky and dry. Speleothems lose luster and cease to grow.