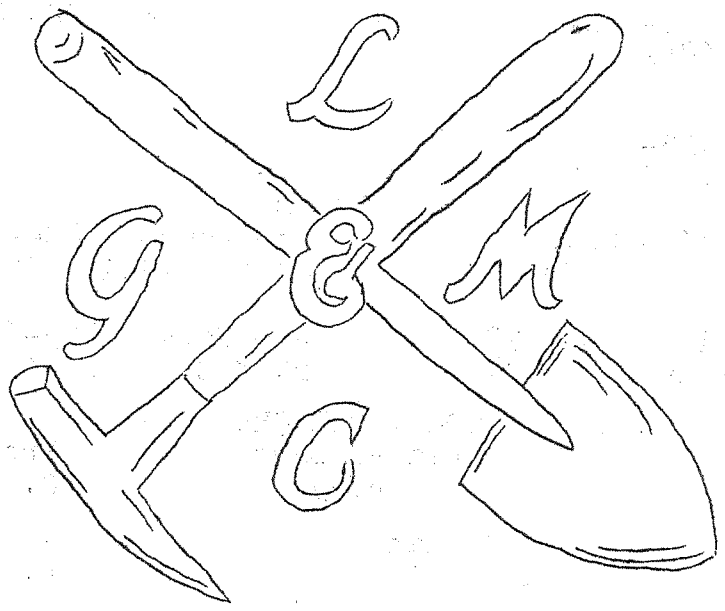
THE PICK & SHOVEL



Official Publication of
THE LINCOLN GEM AND MINERAL CLUB, INC.
P. O. Box 5342
Lincoln, Nebraska 68505

JAN 1971

Members of

Midwest Federation of Mineralogical and Geological Societies

American Federation of Mineralogical Societies

Nebraska State Association of Earth Science Clubs, Inc.

Community Arts Council of Lincoln

Editor: Norma Miller, 931 Cottonwood Dr., Lincoln, NE 68510
Publisher: Phyllis Parks, 2435 S. 19th St., Lincoln, NE 68502

Regular Meetings - 4th Sat. of the month 7:30 PM, Sept. thru May
W.O.W. Bldg., 732 S. 27th St., Lincoln, Nebraska

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, particularly youth and student groups.

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1974 Steering Committee
Ralph Ulrich, Chairman
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THIS MONTH

STUDY GROUP...7:00 PM...ON STAGE:..Jan.23rd
REGULAR MEETING...Sat. Jan. 23rd 7:30 PM
WOW BLDG., 734 S. 27th

PROGRAM...Steering Committee presents
Summary of Activity

Refreshments will be served

ROOM 104...reopened January 8 and will be open every Friday evening 7:00 to 10:00 PM. Come down for your 'indoor fossil field trip'. Learn and experience successful preparation of fossils from field cast to a specimen ready for viewing in a museum cabinet. An interesting and constructive activity for us in these cold winter months.

LPAIDARY CLASSES...a new class will be starting in February. Phone 423-2391 for exact date and information, or John and Lillie Lewis at 466-7289.

NEW MEMBER...Robert (Ann) Matson
426 S. 26th
Lincoln, NE 68510 ph 477-9081

welcome !!

Coming Events

Febr. 12-14	Tucson Gem & Mineral Soc Show, Tucson, Arizona
Febr. 18-20	Scottsdale Rock Club Show, Scottsdale, AZ
Mar. 5-7	Greater Kansas City Gem & Min Clubs Show, Kansas City, KS
Mar. 13-14	Black Hawk Gem & Min. Soc. Show, Waterloo, IA
Apr. 30-May 2	Central Nebraska Rock & Min. Soc. Show, Hastings, Nebr.
May 1 & 2	All Iowa Rock Roundup, Fair Grounds, Nevada, Iowa
May 8-9	LINCOLN GEM & MINERAL CLUB SHOW, NATIONAL GUARD ARMOR& LINCOLN, NEBRASKA
Sept. 4-6	Nebraska Gem & Mineral Club Show, Omaha, Nebraska
Oct. 8-10	Nebraska Association of Earth Science Clubs State Show High School Aduitorium, Ogallala, Nebraska

ATTENTION !!
DUES ARE
PAST DUE

LAST MONTH ...LGMC members gathered Dec. 12, 6:30 PM at the beautifully decorated meeting hall where tables had been set for 120 (?) by the hardworking committee. Delicious aromas of turkey and dressing prepared by the hostesses wafted through the hall. Hustle and bustle to cut and serve the lovely salads and rolls and place hot casseroles on each table took place as guests arrived. Delicious pumpkin pie, coffee and refreshing drink for children came into view and mountains of gifts were placed under the tree. After the blessing by our own Rev. Pfeiffer all heads bobbed as the food and conversation kept everyone occupied.

Everyone was so engrossed in the social aspects of the evening that ceremonies of officer installation were passed over completely. Santa arrived with full stomach and a ho-ho-ho, but no beard, and gifts were opened and enjoyed.

As the clearing away was effected Darline officiated at the piano so any who desired might sing a carol or two. The evening was most enjoyable.

READING THE NEWS: Jupiter, the solar system's largest planet, may also be a tiny star, and seems to be radiating 2.5 times as much energy into space as it gets from the sun. Stars-like the sun-generate energy from nuclear processes in their hot and highly compressed cores. Some scientist wonder if Jupiter too has an interior nuclear power plant.

ROME IS SINKING!!! And has sunk a foot in the last 15 years. It is still dropping at the rate of three-fourths of an inch a year. Venice is sinking four times faster and has the danger of descending into the sea!

AN ARCHAEOLOGICAL FIND in southeastern Iran indicates the existence of previously unknown civilization flourishing at the same time as the earliest previously known centers of urban society in Mesopotamia. Six stone tablets found bore an early form of the Elamite language and 84 blank tablets. Linguists will study the finds but it is known that some symbols are numbers. The tablets were probably storage documents or receipts of some sort.

SATURN is believed to be a giant gas ball circling the sun in the perpetual twilight of 900 million miles distance.

A 10-INCH LONG SKELETON OF A CYNODONT (a four-legged carnivorous reptile with dog-like teeth-ranging in size from that of a rat to a wolf) believed to be 200 million years old was found 350 miles from the south pole by U. S. Scientists. They believe this find along with bones and other fossils will help them establish the existence of Gendwanaland, a supercontinent that included South America, the African penninsula, India, Australia and Antarctica. They believe that their findings indicate that Gendwanaland split about 150 mil-years ago and parts drifted to their present location.

FOOD FOR THOUGHT: If you can put it off until tomorrow maybe they will ask someone else to do it. (via Limestone Rat'lr)

LOOKING AHEAD TO 1974

It seems appropriate as we begin a new year to become aware of the relentless passing of time. We can no longer say that we have five years to prepare for the 1974 Regional and National Federation Show here in Lincoln, we now have about three and one-half years.

This could well be called the year of decisions, for the time has come when we must reserve the site for the big event. Also the Show Director and the Division Chairmen need to be selected. In conjunction with these decisions, we will set up the budget, determine the date, and choose a motto and theme appropriate to the event.

The Steering Committee has reserved the program for our general club meeting January 23rd. At this time they will review all that has been done in the way of planning and present an outline of the proposed organization.

Since it is virtually impossible for the general assembly of the club members to vote upon each and every proposition that will come up in regard to the '74 Show, we will need a good group of leaders who are courageous and are willing to make decisions in behalf of the club. Anyone who is interested in the welfare of the club should by all means consider one of the positions as a division chairman. Each of us should examine the following outline and be ready to speak up at the January meeting, don't wait to be asked, choose your own favorite activity and express your preference to the Steering Committee.

First of all we will need a general manager and coordinator for the project, the Show Director. We will need an administrative assistant to help with the details and to take over in the absence of the Director.

In addition to those we will need chairmen for the following divisions:

- Secretarial; i.e. correspondence, records, history, photos, etc.
- Publicity; promotion and advertising
- Recognitions; ribbons, awards, program and contents
- Dealers
- Special Features
- Displays; competitive and non-competitive
- Registrations
- Floor manager and site; parking, insurance
- Special events
- Security

Let's all plan to be at the meeting January 23rd.

- Ralph Ulrich, Chairman of the Steering Committee

FOOD FOR THOUGHT: A mind is like a parachute. If it is to work, it first has to be open.

GLENNA'S GLEANINGS

Some Big Red fans in Miami over New Years were the Tom Simmons, the Lynn Wells and the Wilfred Wittmanns. All arrived home safely, if a little late, in spite of the big storm.

Tod Ashmun appeared on Rita Shaw's show "Woman's World" in December while home on holiday leave from the Army at Ft. Ord, California. They were discussing what it is like to leave home and family for the service. Tod is attending an Administrative School but will be reassigned in two weeks.

The Gordon McKinneys were unable to make their planned trip to Connecticut to spend Christmas with their son and family. Better luck next time!

Frank and Tom Rule were snowbound several days in Omaha at his sister-in-law's place. Food ran low and they had to make a trip to a neighborhood grocery fifteen blocks away on foot for sustenance.

Dorothy Kohn went to California to be with her sister during the illness and subsequent death of her sister's husband, John DeLong. Our sincere sympathy to the Kohns.

Dr. Neihardt, on local TV on the occasion of his ninetieth birthday, indicated he did not believe the young people of today are so far removed from the present generation as is generally believed. Said he liked most of them and believed they were genuinely looking for a religious experience. He encouraged the old-fashioned fasting and prayer as opposed to drugs in gaining such.

The McGinneses wondered through five southern states on a field trip after Christmas and returned in time to greet fourteen inches of snow. Got oodles of specimens though.

More Big Redders, Nick Kohn and two school friends drove to Miami with sleeping bags, just in case. Home safely in the snowstorm. Lucky kids!

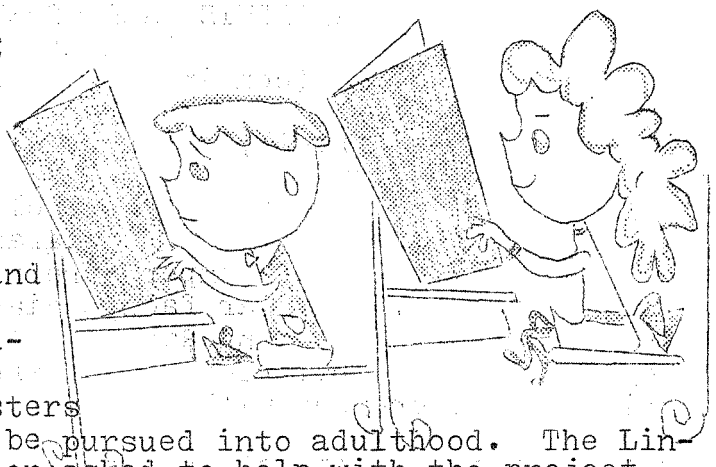
Ruth Weber sends sincere thanks to all club members who wrote cards and letters to her during and since her hospital stay. She reports that she expects to be walking soon without her crutches. Son, Terry, is expected home any day. The Webers are certainly beginning 1971 in luck.

Mineral collectors in the Midwest were saddened to hear of the death of Bill Patt, a member of the Kansas City club, on Jan. 3rd. He will be missed by many.

- Your phoning reporter, Glenna McGinnis

(Thanks Glenna for taking over as club member news reporter. Your help is appreciated very much. Ed.)

PROJECT EXPERIMENTAL NUMBER ONE



Mr. S. H. Nelson, Principal of Prescott Elementary School feels that interested and busy children do not get into the difficulties that idleness causes. With this in mind he and Mrs. Fowler have started what they are calling Project Experimental Number One. The purpose of the project is to get youngsters interested in a hobby that can be pursued into adulthood. The Lincoln Gem & Mineral Club have been asked to help with the project.

Thirty-four children indicated interest in becoming pebble-pups and growing up into full-fledged Rockhounds. To date three meetings and one field trip to Weeping Water, Nebraska, climaxed with a weiner roast, have been held. The group meets every other Monday at 3:30 PM and attendance and enthusiasm remains high. The first meetings were confined to fossils, fossil formation, identification of, and location on a Nebraska Road Map of good hunting areas. The remainder of the meetings will be used to aid the children to recognize minerals.

Any material which club members wish to donate for this project may be brought to club meetings or leave it with Marie Wells. Also, anyone who has interesting collections that they wish to share with the children, please advise me. Ed Woten enjoyed showing and telling the children about his fossil collection at the Dec. 14th meeting. Jim, Phyllis and Linda Parks, Norma Miller and Ed Woten accompanied twenty-seven children, and seven parents and teachers of their sponsoring group who furnished the goodies, on their December 28th Field Trip to Weeping Water.

-Marie Wells, LGMC Junior Activities Chm

Birthdays are always fun and this month our own Dr. John G. Neihardt, Poet Laureate of Nebraska and Prairie Poet Laureate celebrated his 90th with many interviews, guests, and activities. In addition we of LGMC wish you many more "happies", Doctor!

Dr. Neihardt wants to share the rare vintage quality of his experience with us via a spoken record. For those who have heard him recite I need not tell you how fortunate we are to have this record available. For those who have not yet had this privilege I'm sure you will not be disappointed with the recording. Selections in the first limited edition are from A Cycle of the West, When the Tree Flowered, and Lyric and Dramatic Poems. For information on how to acquire this "first" give your editor a call or call Mr. or Mrs. Julius Young, phone 466-9573.

Congratulations!! ...to another 'great' in our club...Frank Marsh, former Secretary of State, recently took the oath of office of Lieutenant Governor! We're proud of you Frank, and our best wishes to you and your lovely wife Shirley. You two made a grand appearance among the dignitaries in the parade at the Inaugural Ball. We're with you.

METAMORPHISM AND CRUSTAL DEVELOPMENT

by ROGER FABIAN

(continued from last month)

Temperature is normally a function of depth of burial of the sedimentary pile. Hence, the metamorphic grade should be expected to increase as the depth of the geosyncline pile increases. Barth (quoted from Hamilton, 1963) gives a diagram showing the metamorphic facies as related to press - temperature regions in a geosynclinal pile. (See figure 3). Similar facies diagrams are given by Fyfe, Turner, and Verhoogen (1958) and Ramberg (1952) (in Hamilton) and these convey the same general picture as Barth's diagram. That is, metamorphic grade increases with depth.

Geikie (1913, p. 61-82) shows the existence of some very deep sedimentary piles which have undergone little if any metamorphism and he contends that the actual metamorphism results from the high pressures and temperatures incurred in the orogenic phase. Geikies case received strong support from Kennedy (quoted from Hamilton, 1963). Though depth zones are widely accepted as a factor controlling zones of progressive regional metamorphism, other factors are also important controls. Dimensions of metamorphic zones provide important evidence to support this case. For example, in the metamorphic terrane between the Moine Thrust and the Highland Boundary Fault in Scotland, the chlorite zone ranges up to 30 miles wide; the biotite zone ranges from 1 to 8 miles wide; and the garnet zone, 1 to 30 miles wide. Further, the isograds are only sub-parallel to the regional strike and are not symetrically related to major folds and are not influenced by inliers of older rock, so there is no simple depth relationship between zones and structures.

Facies and Products of Regional Metamorphism

As is the case with contact metamorphism, rocks regionally metamorphosed are also characterized by several distinct facies. These facies are described by Turner and Verhoogen (1966). They are, in increasing grade:

1. Zeolite facies. There must be a transition, with increasing depth of burial, between diagenesis and regional metamorphism. Many of the changes involved -- e.g., reconstitution of clays, crystallization of quartz and alkali feldspars, destruction of high temperature minerals, and precipitation of carbonates,--are common to both. Exceptionally, even without the aid of deformation, chemically unstable rocks may become completely converted to low temperature assemblages rich in zeolites and duplicating the processes of diageneses. These assemblages constitute the zeolite facies.

2. Greenschist facies. The greenschist facies includes the common products of low-grade regional and dislocation metamorphism. Green schists are characterized by an abundance of green minerals chlorite, epidote, and actinolite. The diagnostic assemblage that distinguishes them from the

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METAMORPHISM AND CRUSTAL DEVELOPMENT - by Roger Pabian (continued)

amphibolites of higher grade (almandine-amphibolite facies) is quartz-albite-epidote, which is prominent, too, in associated quartzo-feldspathic and pelitic schists.

3. Glaucophane schist facies. Glaucophane schists and associated rocks containing lawsonite or jadeite are virtually restricted to post paleozoic geosynclines. They are metamorphosed basalts, tuffs, graywackes, and cherts. Because of their geosynclinal location they tend to be associated broadly with serpentinites; but there seems to be no general causal connection between intrusion of ultramafic rocks and metamorphism of the geosynclinal filling to glaucophone schists.

4. Almandine-amphibolite facies. The amphibolite facies Eskola included all metamorphic assemblages associated with the diagnostic basic assemblage hornblende-plagioclase (oligoclase or more calcic types). Fyfe, Turner, and Verhoogen erected separate facies for the amphibolite assemblages related to contact and regional metamorphism. The diagnostic mineral assemblages of this facies in regionally metamorphosed areas are hornblende-plagioclase-almandine and hornblende-plagioclase-epidote.

5. Granulite facies. Amongst the products of high-grade, deep-seated regional metamorphism is a group of gneissic rocks termed granulites which are characterized by distinctive fabric and mineralogical peculiarities sufficiently outstanding to form a facies, the granulite facies of Eskola. Highly characteristic is the association of hypersthene- and diopside bearing assemblages with rocks containing pyrope-almandine and perthitic alkali feldspar.

6. Eclogite facies. The eclogite facies is based upon the highly distinctive critical association emphacite-garnet, developed in rocks of gabbroid composition. Many eclogites are composed entirely of the two minerals mentioned, and feldspar is completely lacking in most. The pyroxene omphacite differs from pyroxenes of normal igneous rocks in its high content of Na_2O and Al_2O_3. Equally characteristic is the presence of lime-bearing almandine-pyrope garnets.

The products of regional metamorphism vary with the type of parent rock so affected. Read and Watson (1966, p. 151-154) describe three grades of metamorphism and the products thereof.

The lowest is the slate grade. Any fine grained parent rock whose composition allows it to produce flaky minerals as chlorite or mica can develop a slaty texture because of the prefered orientation of grains. Most slates are of pelitic composition, the flaky minerals being derived from clays.

Some parent rocks as sandstones and crystalline limestones can never give rise to rocks with slaty textures. Hence, when they are subjected

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METAMORPHISM AND CRUSTAL DEVELOPMENT -by Roger Pabian (continued)

to slate grade metamorphism, considerably different products arise. Limestones would give rise to fine grained marbles; sandstones may yield quartzites showing evidence of cataclasis; basic rocks may yield green schists or talc schists as basicity increases.

The next highest grade is the schist grade. Schistose textures are more coarsely crystalline than slaty textures but mineral grains may still show a preferred orientation. Pellitic rocks, when subjected to schist grade metamorphism may produce mica schists. These rocks may contain accessory minerals rich in Al_2O_3 as garnet, staurolite, kyanite, sillimanite, and andalusite. Basic igneous rocks yield amphibolites, rich in both plagioclase and hornblende, or hornblende schists. Sandstones yield quartzites whose grains are essentially welded together and accessory minerals as feldspars, garnets, and epidote may be present. Calcareous rocks may yield coarse grained marbles with such accessory minerals as wollastinite, amphibole, pyroxenes, and epidote.

The highest metamorphic grade is gneiss. These rocks have large grains and appear to be banded. Gneisses form in the hottest parts of the mobile belts, and the banding results from the increased chemical mobility. Gneisses may be penetrated with granitic veins and these metasomatically produced rocks may be referred to as migmatites.

Pellitic rocks yield coarse, roughly foliated rocks with feldspars, quartz, and aluminum silicates. Psammitic rocks produce coarse grained quartz and feldspar rich gneisses. Calcareous rocks yield calc-silicate gneisses with calcite, pyroxenes, hornblende, Ca-rich plagioclase, and lime silicates.

(Conclusion next month)

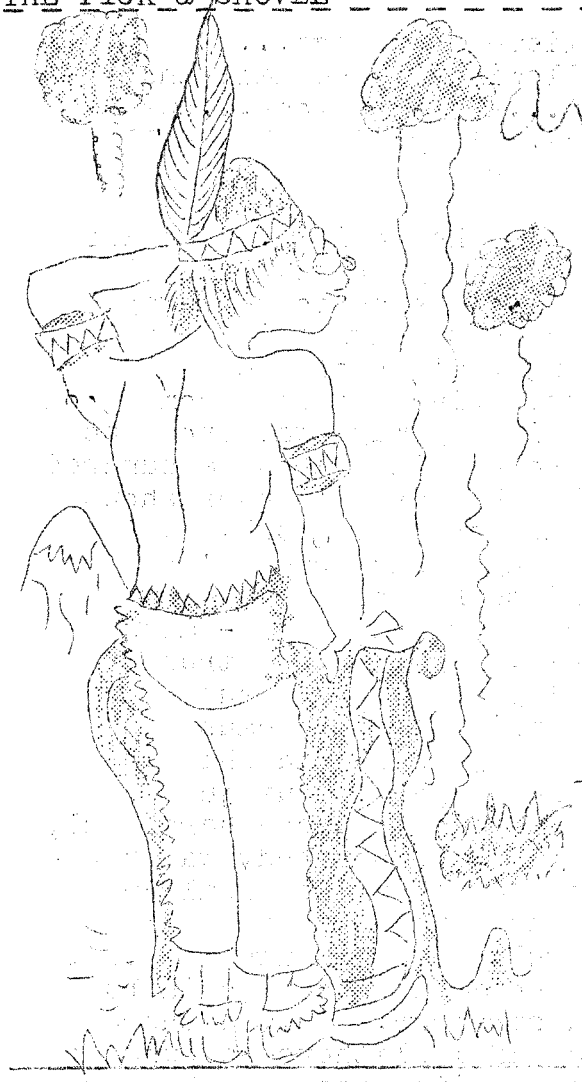
WELL DID YOU??

Help to pour the coffee?
Or get the chairs in place?
Or if a member seemed to have an unfamiliar face
Did you try to make him feel at ease?
And did you clasp his hand? Or did you just ignore him
And let him forlornly stand?
Did you volunteer committee work?
Or weren't you even there?
Did you try to help to pull the load?
Or did you duck your share?
Or were you in absentia
Esconced upon a shelf?
We have no right to ask you, so why not ask yourself?

via Michigan Rockhound News, Earth Science News

And now this via Osage Hills Gems---

DO SOMETHING - Either lead, follow, or get out of the way!



Winter Message from your Chief

1971 GEM & MINERAL SHOW

GOAL: Every member one exhibit

Now is the time for every member of the club to be planning and preparing their exhibit for the 13th annual Lincoln Gem & Mineral Club Show.

This year there will be an open display division using rocks in decorative and floral arrangement for special events and occasions. The open display should give the women of the club a real opportunity to show their talents in using gems and minerals in home decor which is becoming very popular and used extensively by interior decorators.

Try your hand at this! Men, too!

- Marie and Lynn Wells
1971 LGMC Show Chairmen

RECOGNITION IS LONG OVERDUE VIA THE PICK & SHOVEL FOR OWN ROGER PABIAN ...member of LGMC and Second Vice-President for 1971 of our club. In September, 1970, our annual Show was the stage for the release of his new book..."Record in Rock", a handbook of the Invertebrate Fossils of Nebraska, illustrated by Sally Lynne Heald.

This paperbound book is a steal at 50¢ per copy and every fossil collector in the middlewest shouldn't be without one. I know that members of LGMC have availed themselves of this great book which lists all the fossil invertebrates, plants, and fishes that have been found in Nebraska, and if you haven't you are missing the best buy of the year, any year. Roger has done a fantastic job of writing in a language that makes this a book for everyone that wants to learn about fossils, amature or professional, young or old, you will all benefit from it. And it is done professionally, with a complete appendix and full list of references to the primary literature on each genus.

We are truly proud to have you in our ranks, Roger. You have worked hard, and continue to do so and all of us benefit because you are so willing to share. Thanks a bunch.

Anyone wishing to order this book may contact Roger at club meetings or at home, or write University of Nebraska, Conservation and Survey Division, Lincoln, Nebraska. (Add 2¢ for tax in Nebraska).

Talk about crazy people, you'll never believe this page... he On Dec. 23rd your editor received the following in the mail and/almost dared me to publish it. That did it...and here goes...but it sure has me wondering about AH (guess who). If you ask him he'll swear he didn't write it but he did...just ask him.

You may not believe this but I swear it's the gosiple. Yes Sir! When I go rock hunting, I always take along my trusty rusty 22 rifle because I don't want any of them good rocks to get away! No Sir! Well sir, this time I followed this rough twisty trail into them badlands and finally parked my beat up old Jeep on this flat place that looked like a likely place to find some good ones. I started going in circles, working my way away from the Jeep. All of a sudden I spotted it! Looked like about a hundred yards away and I knew it was a dandy by the way it's eyes shown! So I started to zero in, taking advantage of every bush. Well Sir, by the time I was about 50 yards away I was crawlin' on my belly and wriggled up behind a yuca and peaked out for a good look and there it was! The finest rock I ever did see - about a foot long and a half a foot thick. Well, I got my old trusty rusty 22 all lined up and aimed carefully at its eye cause I didn't want to run the risk of ruining this specimen cause I wanted to add it to my collection. That eye sure did shine! After taking careful aim, I squeezed the trigger. But just as I fired that rock blinked his eye and the bullet bounced harmlessly off his eyelid! Well of course that rock knew somebody was hunting for it by that time so I slammed off another shot real quick like and missed alltogether. The next shot went right under it cause just as I shot it sucked up its belly just enough. Well sir, by this time I knew that rock was not only good lookin but also smart. This called for some good strategy. I laid there awhile doin' some thinkin. I thot that if I slithered around to the left that I could get a better shot at its eyes but then it could see me better too so that wouldn't work so good. If I slithered around to the right, I could sneek up closer behind him. So thats what I did. I slithered off to the right and got behind him and as he couldn't see me now, I got to my feet but bent all over and I sneeked until I was purty close. All of a sudden that rock must have spotted me cause he took off in a cloud of dust! But you and I know that a rock can't run very fast so it wasn't much trouble to run him down, which I did -and stomped him to death!

(I told you, you wouldn't believe it. I didn't either. Ed.)

- -

Then via Bear Tracks and Rocky Times I couldn't resist reprinting this bit of bufoonery...

THAT'S FAITH...A rockhound couple ran out of gas miles from nowhere. A tank truck stopped and the driver said he had several thousand gallons of gasoline but nothing to put it in. The rockhounds scrounged around but all they could find was a bedpan. So the trucker put some gas in it and drove away. While the rockhounds stood by their car's gas tank, holding the bedpan, another motorist passed, shook his head unbelievingly and muttered, "That's Faith!!"

- -

FOOD FOR THOUGHT?? (After the above we perhaps need it?)
"A bright eye indicates curiosity...A black eye, too much."

?Wonder what AH had in his canteen the day of the viscous rock? Just Curious

GARNET...the January birthstone...a group of minerals rather than a single mineral...crystal shape - Trapezohedron...composition $(SiO_4)_3$ ...metamorphic and contain a variation of minerals which causes characteristics to vary and so are classified into six different varieties.

Pyrope, the magnesium-aluminum garnet, is the popular gem stone because impurities often give it the clear ruby red to yellow red color. Found in igneous rocks and usually not in well-formed xls.

Almandite (previously almandine, now obsolete) the iron-aluminum garnet, deep violet red but the color may be so dense as to appear black and opaque. Found in metamorphic rocks and usually shows faces of the dodecahedron or trapezohedron.

Spessartite, dark brown to black, reddish and pinkish. Found in rhyolite and metamorphic rocks showing the same faces as almandite.

Uvarovite, the emerald-green variety, is found in chromium deposits and forms good dodecahedral crystals.

Grossularite, the calcium-aluminum garnet, is of the paler tints from pale green through yellow and cinnamon; found in metamorphic limestone and has smooth trapezohedral and dodecahedral faces.

Andradite, found in colors from green and yellow, brown and black, in igneous and metamorphic rocks, and usually in small lustrous xls.

The first three varieties above are composed of aluminum silicates with magnesium, iron and manganese and the last three are of calcium silicates with chromium, aluminum, and iron. The hardness of garnet is 6 to 7.5; specific gravity is 3.5 to 4.3; color is red, black, brown, yellow, green, white; transparent to translucent; and garnet is heat sensitive and birttle usually.

Almandite is the most widely used for jewelry stones and the large crystals mined in New York are used in making garnet paper for abrasive uses.
Uvarovite is found as green crusts in fissures and on seams of chromium.

Andradite is the rarest of the garnets.

N. Miller

NOTICE!!!The membership committee urges every member to pay their dues so that they do not become delinquent.. PROMPT PAYMENT of dues also makes it possible to complete the Who's Who and assure uninterrupted continuance of the PICK & SHOVEL.

DEADLINE for FEBRUARY bulletin material is February 10th!

Our sincere sympathy to Oliver Roskam, Editor of the Kansas City Show-Me Newsletter who lost his wife and co-editor on Christmas day. Their bulletin is one of the finest and we have enjoyed each issue. Oliver and Betty were to be MWF Bulletin Committee Chairmen for '71. This loss will be felt in many areas...Betty pioneered the blind display at the Kansas City Show...a great gal.

DOUBLE THE LIFE OF YOUR DIAMOND SAW blade by keeping the oil clean and keeping the feed on low. Adding ¼ to ½ cup of liquid detergent to the oil acts as a coagulant and holds the grit to the bottom in a tight ribbon.

CLEAN & POLISH gold mountings with denture cream (not toothpaste), it works fine.

Water stained bottles and glass can be cleaned by soaking in Sani-Flush solution. Good for desert glass collectors.

A PASTE of baking soda and water removes bug spatters on your car without injuring the finish.

SNAKE REMEDY - Drink ½ pt whiskey before breakfast, watch for snakes all day as you go about your way. Drink another ½ pt. before bed time -repeat daily if snakes appear!! (Good remedy, eh?)
All the above tips via Jasper's Jargon, OPEN PIT and Tule Smoke Signal

INTERESTING FACTS:
Sphalerite alters to hemimorphite, Smithsonite, and Willemite.

'Selenite' comes from a Greek comparison of the pearly luster of the cleavage to moonlight.

The blue color of celestite has been attrituted to the presence of minute amounts of gold.

Erethrite is known as "cobalt bloom'.

Chinese make many fluorite carvings which are marketed under the misleading name of 'green quartz.'

Salt from the oceans of the world would form a layer 500 feet thick over the earth's land surface.

If four structures the size of the 1,472 foot Empire State Bldg. were stacked on the floor of the Grand Canyon, only the television tower on the top one would poke above the North Rim.

Gems are measured in carats, not to be confused with karats as used in referring to the purity of gold. It takes about 150 carats to make one ounce.

Discovered in 1876, the largest asbestos mines in the world are located near Thetfold Mines, Quebec.

A synthetic emerald is not the same as an imitation emerald. A synthetic emerald is a genuine stone but made by man in a laboratory.

Accra-Ghana's "closed forest", a humid region that stretches from the barren coastal strip far into the wooded Ashanti interior, holds one of the world's largest deposits of aluminum ore, bauxite.

Federal law forbids defacing US coins but it is legal to melt coins, and change them so that they cannot be recognized as money.

Alabaster, a variety of gypsum, is sometimes called Florentine marble.

Wampum, which served for trading among the Indians and colonists, was made from the inside of shells.

The main organic gems are pearl and coral, obtained from marine animals, and amber and jet from plants. Most others are classed as minerals.
(All the preceeding via GEMS)

TO BRING UP YOUR CHILD IN THE WAY HE SHOULD GO, YOU MUST TRAVEL THAT WAY YOURSELF. (via Eureka News & Pegmatite

CRINOIDS...roots at the bottom fasten on the sea bottom. Fasteners or curls called ciri are used to anchor on some object or rock at intervals, as they drift along looking for food.
via ROCK CHIPPER & PEBBLE PAGES

TRYING TIMES ARE NOT THE TIME TO QUIT TRYING! (Amen. Ed.)

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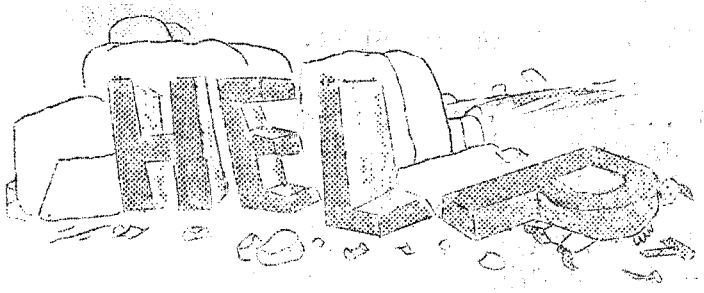

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