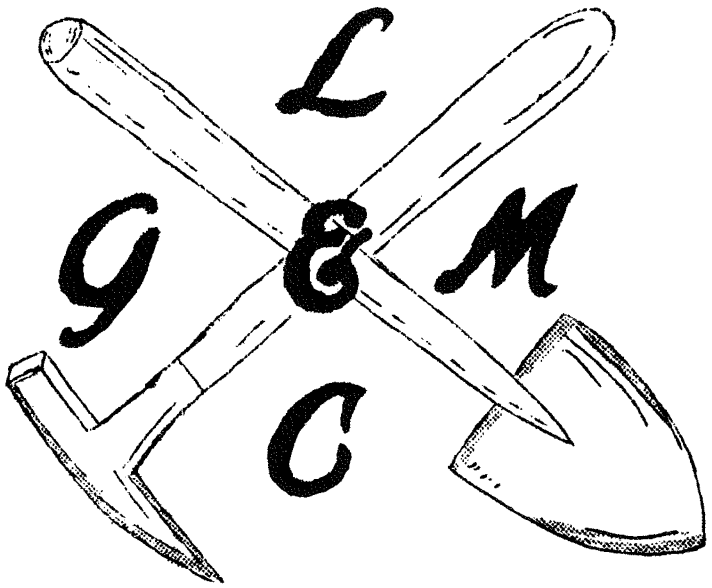
October 1964

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.
Historian	Mrs. Maurice Tracy 3601 South Street
Librarian	Mrs. Dorothy Engelhart 4130 Witherbee Blvd.

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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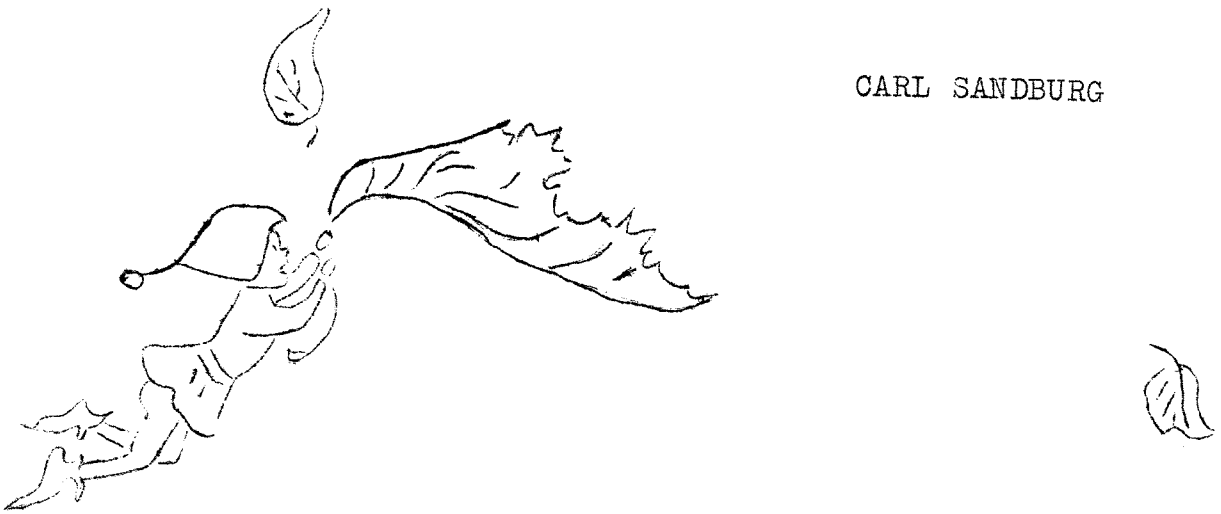
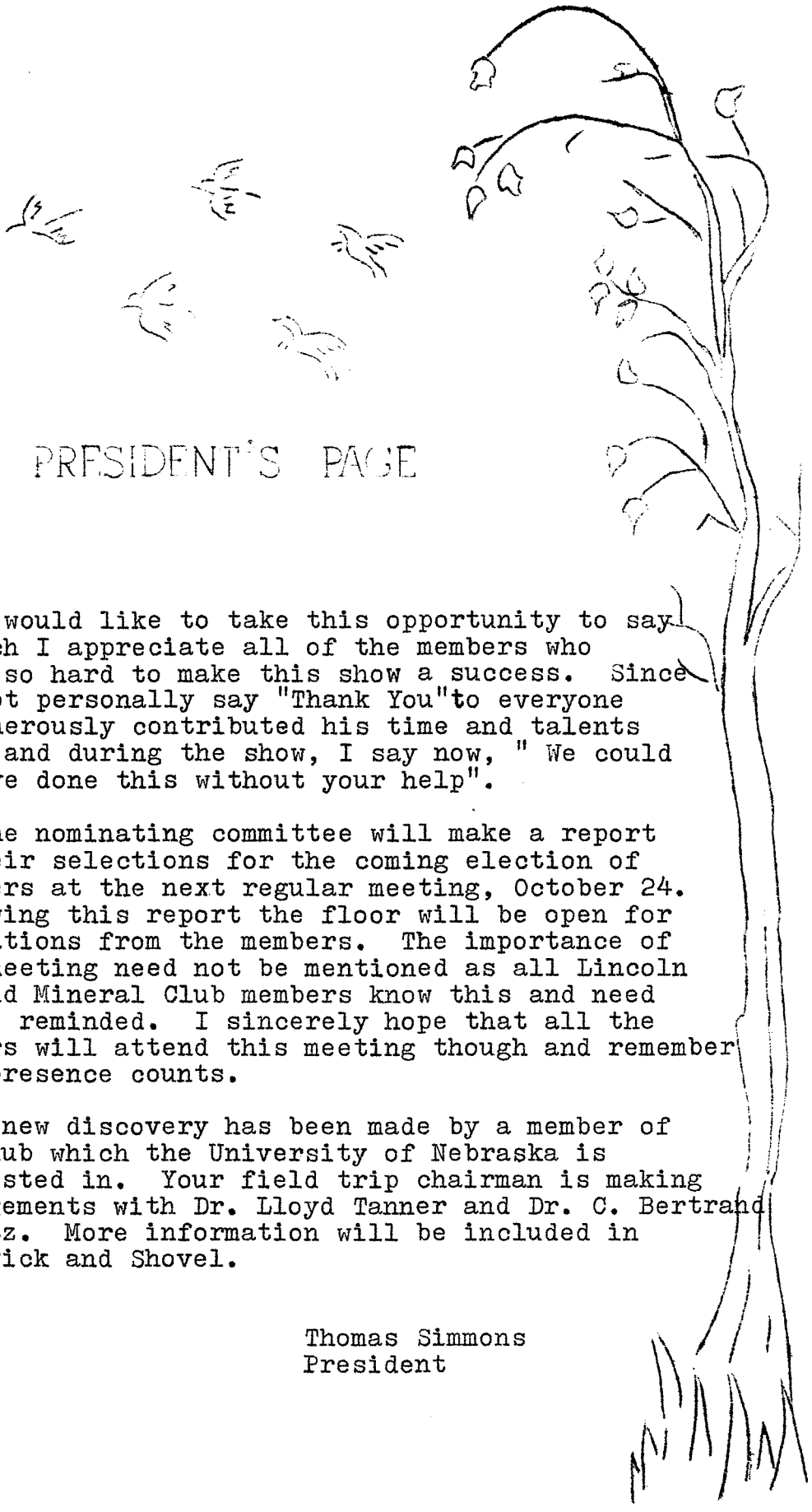
THEME IN YELLOW

I spot the hills
With yellow balls in autumn.
I light the prairie cornfields
Orange and tawny gold clusters
And I am called pumpkins.
On the last of October
When dusk is fallen
Children join hands
And circle round me
Singing ghost songs
And love to the harvest moon;
I am a jack-o'-lantern
With terrible teeth
And the children know
I am fooling.

CARL SANDBURG





THE PRESIDENT'S PAGE

I would like to take this opportunity to say how much I appreciate all of the members who worked so hard to make this show a success. Since I cannot personally say "Thank You"to everyone who generously contributed his time and talents before and during the show, I say now, " We could not have done this without your help".

The nominating committee will make a report on their selections for the coming election of officers at the next regular meeting, October 24. Following this report the floor will be open for nominations from the members. The importance of this meeting need not be mentioned as all Lincoln Gem and Mineral Club members know this and need not be reminded. I sincerely hope that all the members will attend this meeting though and remember your presence counts.

A new discovery has been made by a member of our club which the University of Nebraska is interested in. Your field trip chairman is making arrangements with Dr. Lloyd Tanner and Dr. C. Bertrand Schultz. More information will be included in your Pick and Shovel.

Thomas Simmons
President

SATURDAY - OCTOBER 24, 1964

Regular meeting - 7:30 p.m.

Study - "Mineral of the Month" - OPAL
(See following page for details)

Roberts Dairy Rarty Room
211 South 20th Street

* * *

REFRESHMENT COMMITTEE

Mr. and Mrs. Irl Everett

Helena Baegl

Ray Lambert

* * *

New Club Project

Something a little different is to be offered in the way of a field trip in the near future. A fossil hunt on a high level. One of the members of the Lincoln Gem and Mineral Club discovered this fossil and its identity is not known at this time. It probably swam in the ancient seas or maybe flew over them. Arrangements are being made with Dr. Lloyd Tanner and Dr. C. Bertrand Schultz of the University of Nebraska to remove this fossil as a club project. Those who may be interested may contact me.

Gene Eno
Field Trip Chairman

MINERAL OF THE MONTH

"OPAL"

For October it could be no other than opal; the mineral loved by many and feared by some; the stone ranging from precious for beautiful jewels to adorn lovely ladies or particular gentlemen, to the lowly common opal which few would add to their collection.

We could fill all of our cases with opal, fill all the tables at our annual show and still have no two stones alike. The tales are almost as numerous. How many can the membership bring to this meeting for discussion and viewing?

P.N.P., Assistant Editor

* * *

October 6, 1964

Lincoln Gem and Mineral Club, Inc.
Lincoln, Nebraska

Mrs. Stegman and myself wish to thank the officers and members of the Lincoln Gem and Mineral Club for the invitation to take part in your rock show. We also wish to thank you very much for the invitation to your banquet on Saturday night.

It's impossible to find nicer people than rockhounds and it seems to us your club contains even more than your share of the very nicest of all. We did thoroughly enjoy the time spent with you.

Thank you again for a wonderful experience.

Sincerely

C. E. Stegman

* * *

Florida has taken about $400,000 worth of Spanish treasure as the state's share of a $1 million cache of artifacts recovered from the ocean floor near Fort Pierce by professional treasure hunters working under a state permit.

* * *

No-one wants constructive criticism.It is all we can do to keep up with constructive praise.

A GEM OF A QUIZ

1. The brilliancy of a cut diamond is caused by:

   a. Its high polish
   b. The internal reflection
   c. Absorption of light

2. Which necklace would be the lightest to wear?

   a. Jade
   b. Amber
   c. Pearl

3. A gem with peculiar electrical properties is the :

   a. Topaz
   b. Zircon
   c. Tourmaline

4. Which of these gems is really a skeleton?

   a. Red coral
   b. Red spinel
   c. Garnet

5. What gem is the simplest of all chemically?

   a. A ruby
   b. An emerald
   c. A diamond

6. What gives most colored gems their color?

   a. Impurities in the gem
   b. An optical illusion
   c. The pure chemical composition of the gem

7. The scale of hardness for minerals shows:

   a. The amount of hardness
   b. The rank of hardness
   c. The density

8. A carat, by which most gems are measured, weighs about:

   a. One-fifth of a gram
   b. One-eighth of an ounce
   c. Ten pearl grains

9. Through which of these minerals can you see a double image without a magnifying glass?

   a. Calcite
   b. Amethyst
   c. Quartz

10. Which gemstone has a small quantity of water in it?

    a. Lapis Lazuli
    b. Aquamarine
    c. Opal

Take this test and see just how you come out. It is fun and the answers are on the back page of your bulletin.

John and Molly Daugherty
Via Science Digest

"What's in a Name?"

They say, "Curiosity killed the cat," but I say it has probably wised up more than it has killed. In the wild there is probably no animal who has more curiosity than a fox. Yet what animal matures to be more crafty, cunning or smarter than he? As with the cat and the fox a little well-directed curiosity can be very enlightening. Some of my favorite words are why, where, and how. This month lets ask a why. "Why do minerals have the names they do?"

First, let me make this observation, "The name a mineral has very often tells something about the mineral." Sometimes it reveals what it contains chemically, who discovered it, where it comes from or was first discovered, or one of its physical properties.

Probably the first and last type of names are the most helpful to the amateur mineralogist. Looking at those which disclose their chemical composition - the name barite disclosed barium, strontianite-strontium, uraninite-uranium, etc. Sometimes you have to go back to Latin, Greek or some other language to tie this in which makes minerals with the prefix argent usually contain silver, ferr or ferrous disclose iron and plumbo reveal some lead. Just to show how far this is carried sometimes, try the minerals manfanoferro-calcite, cuproidargyrite, hydroboracalcite, nickeliferous ferri-halloysite, niobo-tantalo-titanate, silico-magnesiofluorite, stibiobismutotantalite, yttro-columbo-tantalite. One does have to call a halt someplace however for batavite doesn't have bats in it and there are no birds in fowlerite. By the way, batovite is a manganese aluminosilicate and fowlerite is a variety of rhodonite which contains about ten percent zinc.

Speaking of fowlerite this brings us to minerals named after men. There are a lot of these. Sometimes it is named for the man who discovered it. In other instances it is named in honor of someone famous. Smithsonite honors the man who was responsible for the Smithsonian Institution, goethite after the German poet Goethe. The rock called catlinite which the Indians used for pipes was named after George Catlin, a famous artist who painted many pictures of Indians and their activities in the first half of the nineteenth century.

Places of discovery or occurrance lend their names to some minerals. Labradorite from Labrador, Tsumebite from Tsumb, S. W. Africa, Californite from California, Benitoite from San Benito County in California and Aragonite from Aragon, Spain.

Physical characteristics are disclosed by the names azurite, axinite, magnetite, carminite, celestite, greenockite, olivenite. Axinite has a crystal shaped like the head of an axe, magnetite has magnetic characteristics, the others disclose their color. Some minerals have the prefix psuedo in front of them. This means they look the same as whatever mineral makes up the rest of the

"WHAT'S IN A NAME?"
(continued)

name. Psuedoapatite, psuedomalachite, psuedolimonite all look like their named mineral but are not. The prefix para before a mineral name means it has the same chemical composition but a different crystal form. Meta before a mineral name means that this mineral is formed after the mineral name which follows. It has been recrystallized, dehydrated or had some change in physical property. For example metacinnabar is black, cinnabar is red; meta-torbernite forms by the dehydration of torbernite.

Sometimes a name of a mineral tells a little story. Realgar is derived from the Arabic raj al ghar meaning powder of the mine. One wonders how they operated the mine with all that arsenic powder around. Flox ferri, a variety of aragonite, is German for iron flowers. The white stag horn like formations occurred in iron mines. The miners thought they looked like flowers, thus the name iron flowers.

In bringing all these ramblings to a close let me say that knowledge of the origin of the mineral's name can help you to the correct pronunciation of the name. Take the mineral barite, I have heard it pronounced bar-ite, ba-right, and bear-ite. Since the mineral is named for the barium it contains the last is correct. One which I really hear mishandled is goetheite. This one is named for the German poet Goethe. His name is pronounced like the word goiter without the r, you take it from there. Aragonite was discovered near Aragon, Spain, thus is pronounced air-a-gone-ite.

By now you should be about saturated with new knowledge or bored by a rehash of what you already knew, but the next time you see a mineral name ask yourself "Why do they call it that?" Some of the answers are interesting. If you don't know the answer don't call me, I've put down all I know about it right here.

--Gene Eno

THANK YOU

I wish to express my thanks to our President Thomas Simmons, for bestowing upon me the title "Rockhound of the Year 1964." May I at this time say, I feel this is a great honor and that this would not have been possible if there were not many people helping me.

To all members of the Lincoln Gem and Mineral Club, a sincere thank you for everything you have done.

Velma Bloyd

THANK YOU

I wish to take this means to thank all members of the Lincoln Gem and Mineral Club most sincerely for all specimens loaned to the special display, which Mr. Simmons, our President, asked me to take charge of for the show.

Without the material, which the members brought forth, this would not have been the success it was. Our club received many fine compliments on this showing.

Thank you very much.

Mrs. Marie J. Carveth

The Gray Goblin Rides Again

As reported by the ghost writer in the front seat, and the skeleton in the trailer.

One morning in late August, Mr. "B" packed his station wagon and trailer with egg cartons, cigar boxes, sample boxes, rock hammer, sledge hammer, pick and shovel. A few unessentials such as clothing for two weeks and food for the same period were tucked carefully into the left over space. When the packing was finished, we left for the "rockiest" two weeks we've ever had. The first day out was a short one. We stopped at the city park in Valentine, Nebraska, and visited the Niobrara National Wildlife Refuge. A wonderful opportunity for picture taking presented itself as we drove through the pastures of buffalo, Texas longhorn, and whitetail deer. A huge petrified tree stump stood in front of the museum; however fencing around this museum piece gave clear indication that it stayed and was not to be placed in a sample box.

The next day was truly a field day for the agate hunters for it was misty and the rocks glowed of their true fortification. We stopped by Mrs. Zeitner's Geological Museum of over 8,000 items from all over the world, located in Mission, South Dakota. When we finished going through the museum, we really did feel like neophites in rock collecting. Mrs. Zeitner was kind enough to mark our map furnishing information of good hunting areas west of Mission, which we later visited.

Possibly the best hunting grounds were found in the area near Wasta, South Dakota. A blood curdling shreik from the skeleton in the trailer caused the ghost writer to fly quickly in the opposite direction as she's rattle snake conscious. It turned out to be an excited cry of joy over a large mudball filled with ammonites. Fossils, jasper, agate, and wood galore was found in this area. The three in the party placed their finds in three piles. Mr. "B" high-graded the piles, but since his pile of rock was mostly high grade and the other two low grade material, we left the area three times more heavily laden than we'd arrived. Boxes were the wrong size for the specimen, so rocks rattled for miles tucked in this corner and that.

Mr. "B" debated over one rock which he finally left, insisting it was possibly a "leaverite". The next day in Custer he saw a huge TeePee Canyon agate which looked exactly like his leaverite. Without further ado, he grabbed us by the hand and hurried us faster than the speed of sound. Wind blowing over the fenders was wilder than any ride a witch ever had on a broomstick. One hundred miles later, in Wasta again, he picked up his prized "leaverite". He still hasn't cut it. As one ghost writer to another, it's a hugh leaverite. As long as it's in one piece, it's still an agate to Mr. "B", who's afraid to cut it at this point.

THE GRAY GOBLIN RIDES AGAIN
(continued)

We drove the one hundred miles back to the trailer and arrived there long after dark. It was this night that the tent was named the Glow Worm and after the shadow show performance, it was agreed that the lantern would be placed on the floor in the future.

The area in Custer State Park where we camped was beautiful. Originally, we stayed near Game Lodge because of the hot water showers, but later we discovered that this was one of the least reasons for staying here. We can well appreciate why President Coolidge used this area for his summer White House. The soft ripple of the mountain stream rushing over the rocks lulled you to sleep each evening. The deer was so tame that a mother would bring her young to drink at the stream while you were eating breakfast. The smell of pine trees and camp fires in the evening as you enjoyed the brilliant sunsets makes this a special point on the map to which we must return.

Because of a fire south of us, near Wind Cave, we were lulled to sleep the last night by the sound of rushing trucks over the narrow curved highway hurrying tanks of water, foam as well as bus loads of men from Ellsworth Air Force Base, south to fight the fire. What a waste to destroy the beauties of nature in this careless way.

The next day, we joined our Lincoln Gem and Mineral friends at Fort Robinson Park near Crawford, for the president's field trip. Our sincere thanks to Tom Simmons for his efforts in helping everyone find something besides "leaverites". The only complaint is that the time passed so quickly here that it was time to go home before we realized it; consequently, this is also listed on our map as a place to which we must return.

Mr. "B's" Ghost Writer

ROCKY NUGGETS

At the Lincoln Gem and Mineral Club's annual picnic, President Thomas Simmons announced the " Rockhound of the Year." So shocked was Velma Bloyd that it took several nudges from her neighbors at the meeting to get her attention. To this day, she still isn't sure what was said, although she protested that there were many others more worthy of the title. Mrs. Bloyd said that she had only done her job. President Thomas Simmons agreed that although she had done her job, this award was for activities done beyond the call of duty. Heading the committee on study cases for the school children and lecturing at the local schools, plus all the extra hours spent helping the club in various ways, were among the reasons Velma was given this award. Congratulations to our fellow rockhound, Velma Bloyd.

During September Lloyd Lederer jaunted to the western part of the state and returned home with a twenty-five pound fairburn. According to Lloyd, the fairburn gave him quite a struggle carrying it back to the car; but he wasn't about to leave it behind. At the October 24th meeting, Lloyd will bring his fairburn for all of us to admire.

Norman dropped by the Krejci's and the first thing that Frank said was, " We found a beautiful stone on our vacation in the Black Hills and we don't know what it is." Here's hoping they've found out what it was. Frank, How about it?

Mr. and Mrs. Ralph Ulrich have a very unusual blue and yellow sapphire which is faceted. It is perfect and with no flaws.

Howard Taylor and family, Mr. and Mrs. C. Ray Waddell, the Ralph Ulrich's, Harold Eno, Mr. and Mrs. Lloyd Baugher, Gene Eno, and the Norman Engelharts attended the Omaha Rock Show.

Bruce Simon went to the Topeka, Kansas rock show. He said that the public certainly enjoyed the arrowhead maker, Mr. Spence. There were always at least forty to fifty people watching the demonstration,

The reception of the Visual Aid Lending Library has been tremendous since the project was put on loan. These cases are being displayed at St. Teresa and Holy Family schools at this time.

Leon Agee has presented the club with a faceted round brilliant cut sunstone from Lakeview, Oregon. This gem will be on display in our "Gems on Location" case. Mr. Agee was the professional facetor at our recent rock show.

All the news for now. If you have gone on vacation or just found a rock call me or I will be calling you.

Dorothy Engelhart
Reporter

LETTER - A - MONTH
by Cecilia Duluk

THE MIDWEST SLIDE PROGRAM SERVICE

One of the many services offered to Midwest Federation clubs which can be of direct benefit to your club and its members is the Midwest Slide Library, which contains some of the finest available and many specially prepared 35mm color slide programs on all phases of the earth science hobby, from "Rocks of the Earth's Crust" to "Jewelry and Silver Service." All of the programs come equipped with a numerically corresponding script which any narrator can easily follow.

Begun three years ago under the direction of Ellis Courter, the Slide Library has grown from two programs to the present total of 23 program sets, and will continue to grow. Many individuals and societies have helped this growth, as well as the now well-established "program exchange" which brings us the best programs from other federations.

Mr. Courter is now, however, the new Treasurer of the Midwest Federation, so as new Program Chairman let me introduce myself. I'm Cecilia Duluk, and you can write me at 6700 Amboy, Dearborn Heights, Michigan, Zip No. 48127. I hope that I can be of service to you and your club, with programs from the Slide Library and other program aids available.

Following is a listing of all the currently available slide programs. To order one, just request it by the name and the date you wish to show it. Because of the demand, however, please list <u>at least</u> two alternate choices or, if it is a particular program you want, list two or three alternate dates. The only charge made for the use of these is 50¢ to cover cost of outgoing postage, insurance and handling, which should be included with your request.

Also remember, the farther ahead you request a program, the better chance of it being available, so please write me well in advance. I am sure, too, that you will help me by returning the program immediately after your use, so that it will be available for the next club.

Again, let me say that, if I can be of service to you by reserving and sending your club one of the programs on the accompanying list, or for program assistance of any kind, please write me, and I will do my best to help. The Slide Library is here for <u>your</u> club's use, and we hope it will keep on growing to provide your club with any type of program on any earth science subject that fits your interest.

The first three people phoning 434-4781 after reading this article will receive a prize.

Cecilia Duluk

A GEM OF A QUIZ
(answers)

1-b Light passing into the top of the diamond is refracted (bent) more than in any other transparent material. As light rays hit the bottom surface of the diamond, they are internally reflected back to the top. The reflection of many light rays produces the diamond's brilliance. The "fire" of the diamond, however, is caused by the dispersion of the colors of the rainbow in white light. Each color in white light is refracted a different amount and separated from the rest.

2-b Amber is only slightly denser than water. The specific gravity of amber is 1.05-1.09. Specific gravity tells how much denser the mineral is than water. Amber is one of the few so-called organic gems. Most gems are inorganic.

3-c When you heat a crystal of tourmaline, it becomes electrically charged--positive at one end and negative at the other. When you cool it, the poles reverse themselves.

4-a Coral polyps (small sea animals) secrete a calcium compound to build up their skeletons. The coral most often used as a gem is the precious or red coral. There is also a black coral.

5-c A diamond is composed of a single element--carbon.

6-a The color of most gems is due to the presence of chemicals, such as chromic oxides in amounts so small they are not included in chemical formulas. Traces of these impurities that color the gem add tremendously to their value.

7-b Only the rank of ten minerals, not the hardness. The rank runs from Number 1, the softest--talc, up to Number 10, the hardest--the diamond. But the scale does not mean that Number 10 is twice as hard as Number 5, apatite. And Number 9, corundum, is not three times as hard as Number 3, calcite.

8-a Actually one carat weighs 0.205 grams. A point, also used in referring to diamonds, is 0.01 carat. Usually gems are weighed in carats, though some are measured in millimeters and priced by their size.

9-a All transparent substances reflect light, but calcite can split a ray of light and bend each part a different amount. When you look through crystalline calcite at a line of print, you see two images of it. Some other gems act the same way, but you need a microscope to detect the double refraction.

10-c Opal is a solidified jelly composed of silica with a variable proportion of water--from 2 to 13 percent. The opal is the only common gem that is amorphous, which means that its atoms are not arranged in an orderly fashion.