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THE



J A S P I L I T E

Affiliated with the Midwest Federation
of Mineralogical and Geological Societies

Attention clubs... note directory deadline date

The 1978 Directory forms should be in your hands by this time. Please note that the absolute deadline for returning these forms completed with check for dues will be January 10, 1978. There will be no grace period. If you want your latest club information in the Directory it must be in Jean Reynold's hands by January 10, 1978. This was the decision of the Council at their meeting in Dayton this year.

Midwest Federations NEWSLETTER



Published monthly except July and August as a service to members clubs.

All news, articles, subscription orders and requests for information concerning publication should be sent to the Editor, Haydon Peterson, Parrot Printing, 2125 Forest Ave., Des Moines, Iowa 50311

December 1977 - Issue No. 180

A message from President Paul Good

It is a great pleasure to accept the Jade gavel. I am thankful for the vote of confidence which has been given to me by the members of the MWF to serve as your president for the coming year.

I realize that the year ahead will be hard work and will take a lot of time to carry out the work that is to be done. There has been a lot accomplished in the years past, but I am sure there is still plenty to be done. With the help of the elected officers, State directors, committee members and each member of the Federation, we can complete a lot of work in 1978.

Remember, "This is your Federation." I hope the member clubs will feel free to use what the Federation has to offer and make suggestions on how we can help improve our services. In order for any club or Federation to grow, it takes cooperation of everyone, both the member clubs, and the executive committee, officers and assistants working together.

Let us all make this a GOOD year for the Federation. If I can be of help to you, please feel free to call upon me or any one of the officers or committee chairmen.

ALL AMERICAN DEADLINE IS MARCH 15, 1978

Midwest Federation clubs will find the All American-Merit Award entry blank in the November AFMS Newsletter. Please notice there is a new deadline. The forms must be mailed to the Regional Chairman, June Zeitner, by **March 15** this year. The date had to be changed because the Regional Shows begin in April this year. Midwest has traditionally supported the AFMS All American program with enthusiasm. Check to see if your club has its entry blank, which should be slightly easier for your club to fill out this year. For more information about the All American and Midwest Club Merit Awards write to June Zeitner, Mission, South Dakota 57555.

Program notes

Program chairman, Donald Stinnett, announces the return to the program library three programs that had been withdrawn from service sometime ago due to the worn condition of the slides. The programs are, "Our Igneous Rocks," "Our Sedimentary Rocks" and "Our Metamorphic Rocks." These are all fine educational programs and can now be booked again by clubs.

A group of Wisconsin clubs have made available to our library a program entitled "Ice Age National Scientific Reserve." This program is available now for club booking.

Our program chairman, the Stinnetts, Don and Louise, are continually at work in efforts to encourage clubs to make new programs. If your club is interested in making a program for the library contact the Stinnetts for help and guidance.

Through combined efforts of a group of Wisconsin clubs and individuals they have made available to us a program entitled "Ice Age National Scientific Reserve." The dream of this area as a park was that of Ray Zillmers and it was finally enacted through the cooperation of the State and Federal governments.

The clubs and individuals whose efforts helped make this program possible included Dr. M. E. Ostrom, Director and Geologist of the Wisconsin Geological and Natural History Survey; Harry Pease of the Milwaukee Journal, Kettle Moraine Geological Society, U. S. Geological Survey EROS Data Center and Rep. Henry S. Reuss (D-Wisconsin). Betty Rasmussen was the organizing factor. The program is available now for club bookings.

Order your programs well in advance of the date you wish to use them. Always give second choice of programs and dates so that you will be sure to have a program for your meeting date. And be sure to indicate exactly to whom the program is to be shipped with complete address. Include your clubs check in amount of \$2.00 for each program ordered.

Address your request for information, or for booking slide programs, to Donald Stinnett, 29462 Aspen Drive, Flat Rock, Michigan 48134.

LITTER IS AN UNSIGHTLY THING!

Write it *right*

by J. C. "Cal" Keator

The importance of correctly recording events and writing records cannot be overemphasized. Serious problems can develop or important information can be lost in foggy writing. If there is any possible way, the general reader will get the wrong impression, and the sharpie can deliberately obscure entirely the original event or intent.

In the first place, your power of observation should be developed to the fullest. Do you see and comprehend what you are looking at? Or do you go around with your head in a sack-seeing only what you want to see?

Let's get down to cases! We read many bulletins. A VERY FEW present a true picture of our conventions. Many times we have had to agree with the quote: "You wouldn't believe that these different people had been to the same meeting."

The same can be said about our own board meetings.

"The committee reports were read and accepted."

"The membership chairman submitted three applications for membership. MSC"

"The board approved the dealers for the upcoming show."

"Next year's show date has been set."

"The First Vice President gets her wishes."

What earthly good is this "tule fog?" Those present at the meeting knew what was going on but next year, or even next month, who could tell what happened.

What committee reported, who was the chairman and what did he/she report?

Who were the new members accepted? What are their addresses and phone numbers?

Who were the dealers the board approved? Someone will say, "We didn't approve dealer A," another will say "We didn't approve dealer B," and someone else will say, "We approved dealer Z" (whose application was received only last week, AFTER the meeting.)

And . . . what is the date? ? ? of the next show? ? ?

"The First Vice President gets her wishes" is what I recorded as secretary for a church youth group fifty years ago - in 1926, to be exact. I have never forgotten what the minister's wife said. "Maybe those of us here know about what you have written, but next month we won't remember what the 1st Vice President is to do." Write it correctly and you will save a lot of trouble, headaches, and confusion. You are writing HISTORY.

There is a lot of discussion as to just who the charter members of a club are. The secretary didn't think it was necessary to write the names down. "Everybody knows who they are." Write it correctly, to avoid possible legal problems later. If the club is organized as a non-profit educational group, say so in writing. You might have to prove it.

There is no excuse for sloppy inaccurate lazy reporting.

I heard one club secretary say, "I didn't agree with the motion so I just didn't write it down." Another said, "I never take notes. I write out the minutes just before the board meeting."

How can I be sure I am right? Here is a partial listing of our reference library:

First I have a 95¢ Vest Pocket Dictionary in the rack by the phone where I do most of my writing.

The American Heritage Dictionary is our best reference dictionary.

If we can't find the right word, "Rodale's Word Finder" comes to our rescue.

Some of our mineral authorities are: first, the Golden Book "Minerals of the World - A Guide to Field Identification" for a very quick answer. We have several Dana's but the most often referred to is "Dana's Textbook of Mineralogy - Fourth Edition." We have all Sinkankas' books, Sanford's "Oddities", Fentons Rock and Fossil Books, and, for "pick and shovel" definitions, we have the Bureau of Mines Dictionary of Mining, Mineral and Related Terms.

We supplant the above with a number of books on geology, archeology and paleontology, and for anything regarding exhibiting we refer to the Federation manuals or Fleischer's list of mineral species.

We have one book, "Techniques of Clear Writing" by Robert Gunning, which describes the fog index. Every written paragraph article or book can be given an ease of reading index. Reader's Digest and National Geographic have an F.I. of about 10 (meaning they could be easily read by a high school sophomore). Technical papers and legal documents can go up to 20 on the Fog Index scale. Only a Ph.D. or a lawyer can begin to wade through that.

We remind you of Col. Johnson's "K.I.S.S." - "Keep It Simple, Stupid."

The over use of 15 letter words will turn off your reader unless he is determined.

Personally, I like the classification of "Reprint Index." If your articles are worthwhile, short (not always), interesting, and factual, other editors will reprint your copy.

Punctuation is necessary but don't sprinkle punctuation marks indiscriminately, like confetti, throughout your copy. Use punctuation to bring out the correct meaning. If you are not sure, look it up in a CURRENT handbook of writing. If you purchase one, make sure it is a recent one or a revised edition. Times and titles change. (A title is a small diacritical mark, such as an accent, or the mark over a vowel.)

Conversely, when you are reading, read it right! Shades of meaning sometimes escape you because you are not paying attention to what you are reading.

WRITE -- AND READ -- CORRECTLY!

NEW AFMS PRESIDENT

Donald B. Langston assumes his duties this month as the 1977-78 President of the AFMS. Don lives in Ft. Worth, Texas and is a Senior Design Engineer at General Dynamics, owner of Texas Mineral Supply and Prospector Lapidary Shop.

He attended the Spartan School of Aeronautics and received his B.S. degree in 1951 from North Texas State University, and an M. Ed. degree in 1962 from Texas Wesleyan College.

Don is a past president of the Rolling Rock Club, the Ft. Worth Gem and Mineral Club, Stonesteppers of General Dynamics, General Dynamics Recreation Association and the South Central Federation.

NEW CANADIAN EDITOR

Ed Montgomery has been named bulletin editor for the Central Canadian Federation of Mineralogical Societies. Clubs wishing to exchange with the Federation should address Mr. Montgomery at 56 Col. Danforth Trail, West Hill, Ont. M1C 1R1.

TWO MISSOURI WILDERNESS AREAS

Missouri has two Wilderness areas, with four others under study. The two are Hercules Glades of Taney County and Mingo National Wildlife Refuge in Wayne County.

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January 1978 - Issue No. 181

All America time is here again

Has your club started to get its All American entry done in time to be in the mail by March 15??? Note the earlier date this year. Your club received an entry blank included in the November AFMS Newsletter. Another entry blank is enclosed with this January newsletter.

Last year the "club-of-the-year" was Central Michigan Lapidary and Mineral Society of Lansing. There were also five more AFMS Trophies for Midwest clubs and several Midwest Merit Awards as well. Your club may win this year.

Send your entry to June Zeitner as soon as ready. Midwest participation has been outstanding in this program, because it all started here. Each of our states has had one or more winners in the close competition. This is your chance to brag about your club's accomplishments. We are proud of all of our winners, and of all of our club's which enter. Thanks for your participation.

Howard and Marie Taylor of Lincoln, Nebraska have been selected as Chairmen of the judges committee for the All American Merit Awards program in the Midwest Federation this year. Howard is a Past President and Marie is Nebraska Director for the Federation. Their committee has been chosen from the award winning Lincoln Gem and Mineral Club, which was host for the last combined Midwest-AFMS show. The committee members are Mr. and Mrs. Ewald (Luella) Paul, Mr. and Mrs. Glenn (Vera) Lyman and Mr. and Mrs. Jim (Phyllis) Parks.

Judging of the many entries for the AFMS and Midwest trophies is a difficult and import job, and the Federation is fortunate to have this team of qualified and well liked members.

If you can't find your entry blank or have any questions about the awards, please write to June Zeitner at once. Her address is Mission, South Dakota 57555

Betty Myers of Park Forest would like to see Illinois have a State Fossil . . . she suggests the mysterious beastie "The Tully Monster." A good suggestion, but there are bound to be more since there are so many unique fossils in the coal beds of Northern Illinois.

Repeat of an important announcement

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Have you found a Meteorite?

Mr. Paul P. Sijera of William Rainey Harper College recently sent the following letter to many Midwest Clubs.

"We would like to enlist your help and support for our Meteorite Recovery Project. In this effort, our College, in cooperation with the Field Museum of Natural History in Chicago, is seeking to make the public aware of the scientific importance of Meteorites and to educate individuals on meteorite recognition. In dealing with meteorite recovery most specimens are discovered by individuals who have no scientific training but do possess a scientific curiosity. It is just this type of individual we wish to reach.

We hope that your organization would encourage its members to be aware of the fact that meteorites can be found almost anywhere and that they should be looking for them when in the field. We have free descriptive literature available and also offer a \$100.00 incentive for the finder of a previously unreported meteorite. We ask that those who are interested send in a stamped self-addressed, business-size envelope when requesting the pamphlet."

Please forward all information or inquiries about meteorites to Mr. Paul P. Sijera, William Rainey Harper College, Geology and Physical Science, Palatine, Illinois, 60067

GROWING PEARLS

A Wisconsin farmer planted 3000 seeds and is waiting for his harvest . . . pearls. He is growing the pearl bearing mussels in tanks. James Horpol has pointed out that Wisconsin has a past reputation for good pearls, and he hopes to expand his operation, to make pearl farming a successful endeavor.

Franklin Mineral Museum excellent place to visit

One of the great mineral localities in America and the world is Franklin, New Jersey. There is a great new Museum and Mine Replica now at Franklin, and the Franklin Mineral Museum, Incorporated has just published its first newsletter, 'Franklin Museum Messenger' superbly edited by Frederick Fraissel, Jr. Annual memberships to the museum which includes the bulletin, are \$5.00.

The Franklin Mineral Museum contains a comprehensive display of the approximately 200 species of minerals from the Franklin-Ogdensburg, New Jersey area, site of the remarkable zinc mines of the New Jersey Company. Few minerals from elsewhere are on display, yet the visitor will see polished and set gemstones, colorful crystals, and specimens of great rarity, as well as artifacts and curios connected with the past of this unusual area.

The wealth of mineral specimens at Franklin owes its abundance to a sequence of geological events never duplicated elsewhere. A billion years ago an ocean covered the area, and in quiet deep spots, iron, zinc, and manganese accumulated and were incorporated into a thickening sequence of sediments and submarine lavas. Over 800 million years ago, depth of burial and folding transformed the rocks and their enclosed minerals into the layered materials we see today. Many of the rare minerals were formed during the first period of mountain building.

Subsequently, weathering of the new land down to sea level developed a beach at Franklin some 550 million years ago, and fragments of the newly exposed mineral deposit or ore body were incorporated in the beach sands. Again the land sank in the classic geologic pattern of submergence, deposition, uplift, and erosion. Perhaps four periods of mountain building took place during repetitions of the sequence, each with an opportunity for deep fractures to allow introduction of new solutions and vapors to add to and alter the earlier minerals.

For the last 100 million years, the Franklin area has been undergoing erosion as the high ground of New Jersey has washed down the rivers and the coast to form Southern New Jersey and fairly recently, a million to 10,000 years ago, glaciation has aided the process exposing the ore bodies for discovery and mining. Meanwhile, minerals continue to form where weathering can alter the older minerals. The story is far from completed, and new minerals are being discovered continually.

The Franklin Mineral Museum contains permanent and loaned collections of unusual interest. It also houses a spectacular display of fluorescent minerals whose brilliant colors may be viewed under ultra-violet light. The Replica Mine, located in the original engine house which was used to hoist ore from the open cut, simulates actual mining operations full scale in the Franklin mine.

The town of Franklin turned over to the Museum the administration of the historic Buckwheat Dump. Admittance to the Dump is now from the upper museum level, and the Franklin Mineral Museum, Inc. is privileged to offer collecting in such a richly mineralized area. The Museum is continually acquiring new specimens of superior grade so that visitors will always be able to study the best in Franklin minerals. The Museum has its own laboratory for the identification and preparation of minerals for display.

**DON'T LITTER.....
HELP KEEP AMERICA CLEAN!**

Straight collection in new location

The Halver R. Straight mineral and gem collection, given to the Central Iowa Mineral Society of which Mr. Straight was a member upon his death in 1958, has been housed in Old Main on the campus of Drake University, Des Moines, Iowa. The collection was opened to public showing during the National Gem and Mineral Show held in Des Moines in 1962.

The collection has now been moved to larger and more spacious quarters in Drake University's Harvey Ingman Hall of Science. Central Iowa Mineral Society is planning a special open house to commemorate the occasion on Sunday, January 15, and all members, past members and friends and general public are invited to attend.

The collection, one of the finest in the country, can be viewed during regular visiting hours of Harvey Ingman Hall.

About Mr. Straight:

Halver Straight was born in El Paso, Illinois in 1882 and attended Grinnell College and the University of Illinois where he received his degree in Mechanical Engineering. He married in 1909 and had two daughters and a son.

He moved to Adel, Iowa upon his graduation where he managed the Dallas Clay Products Co. for his father. He invented and manufactured pugmill knives and other devices used in the making of brick and tile. He invented and held patents on 87 tools and instruments used in the manufacturing of clay products.

He established the Iowa Soya Bean Plant at Adel, Iowa and the Clay Products Co. at Redfield, Iowa. He developed the Sequensomatic car dumper, a device designed to unload a rail car of grain in a matter of minutes by raising and tilting it.

MINERAL CHANGES DUE TO WEATHERING

The surface changes that affect ores are very important. Most minerals will change when left to the action of weather. Pyrite changes slowly to limonite, and chalcopyrite changes to limonite and malachite. Sometimes the variable minerals are entirely dissolved at the surface and the rock is left barren. This is particularly true of copper ores, though usually some traces of copper will be left at the surface. Here is a list of some of the weathering changes of most common occurrence and of greatest interest.

Feldspar changes to clay.

Olivine and hornblende change to serpentine or chlorite rocks. Impure limestone may dissolve and leave clay.

Pyrite changes to limonite and hematite.

Copper-sulphide minerals change to malachite, azurite, cuprite, or metallic copper, or may be dissolved entirely. Some copper minerals become partly limonite.

Silver minerals change to horn silver (cerargyrite or dissolve.

Rhodochrosite and rhodonite change to psilomelane or pyrolusite (manganese minerals.)

Calcite dissolves.

Gold may dissolve if manganese is in the rock.

Quartz, fluorite, apatite, barite, and tourmaline are not likely to change. *from Rockester News, Rochester, N. Y.*

4

OFFICIAL PUBLICATION
of the
ISHPEMING ROCK AND MINERAL CLUB, INC.
Published Quarterly

OFFICERS & COMMITTEE CHAIRMEN - 1978

President	Robert Phillips, 405 S. Rose	Ishpeming
First Vice President	Olive Sain, 818 W. Kaye	Marquette
Second Vice President	Robert Larson, 340 Washington	Marquette
Secretary	Laurence Sain, 818 W. Kaye	Marquette
Treasurer	Arnold Mulzer, 322 Rock	Marquette
Publicity	Dorothy Bowns	Negaunee
Finance	R. R. Anderson	Marquette
Field Trip	Joseph LaChance	Marquette
Safety	Leonard Bartelli	Marquette
Curator	C. R. Markert	Ishpeming
Scholarship	Marian Markert	Ishpeming
Hostesses	Ingrid Bartelli and Olive Sain	Marquette
Education	Vernon Miljour	Gwinn
Jr. Member Co-ordinators	Pat Elie & Chris Miljour	Gwinn
Librarian	Ernie Johnson	Marquette
JASPILITE Editor	Sandra Phillips	Ishpeming
Publishers	Laurence & Olive Sain	Marquette
Liaison Officer	Carlton Gutman	Marquette

Deadlines: January 1, April 1, July 1, and October 1

Meetings: Business meeting: 1st Friday of the month, 7:30 p.m.
at Bothwell Middle School, Marquette
Program & activity meeting: 3rd Sunday of the month at
2:00 p.m., Bothwell Middle School, October-April.
Field trips during the summer months.

Membership: The Ishpeming Rock and Mineral Club, Inc. is open to anyone interested in the Earth Sciences.

- Initiation fee \$1.50
- Husband and wife annual dues . . 3.00
- Adult annual dues 2.00
- Junior annual dues 1.00

Material in this bulletin may be copied provided full credit is given to the author and the bulletin.

OUR PURPOSE

To enjoy, to learn, to teach and to conserve
The rocks, the gems, the fossils and ores.
To collect, to admire, to brag and to show.
The material we've found, we'll trade for yours.

. Bob and Marian Markert

CONTENTS

Officers Contributions . . . 2-5	Abalone Shell. 12
Amer. Fed. Awards 5	Powers of Turquoise. 13
My Trip to Belize 5	History of Gold. 15
Rock Hounding/Reminiscing. . . 7	Archaeologists 17
Calendar of Events 10	Display Cases 18
Soapstone 11	Crystallography. 19

MESSAGE FROM THE PRESIDENT

By Carlton Gutman

An office holder's tenure may expire, but vexing and tenacious problems persist knowing no time constraints. My concerns when taking office have been fugues throughout my term--encouraging the youth in our hobby and a permanent meeting place. Perhaps at the beginning of this year, we can set these as obtainable goals.

No one can do a responsible job for a large, ambitious organization without able assistance. To the credit of the Club most everyone pitched in and did what was necessary. Putting on an U. P. Gem and Mineral Show and the Rock Swap are monumental tasks and ones that the Club performs with aplomb. Indeed many clubs and individuals through the Midwest and elsewhere eagerly await an Ishpeming Rock and Mineral Club sponsored affair because of its efficiently run and diversified activities. We can feel justly proud of belonging to such an organization and associating with its fellow members and friends.

I thank everyone who held office with me and those who assisted in the chores of running the club. Many did more than I in advancing the efforts of the Club, and I only hope I can be as active a member as them in the future. We are saddened by the loss of some of our members, they will never be forgotten; remember to collect a fine specimen on your next outing in their memory. Esteem the crystal and mineral, they are reflections of greater forces.

Have a happy 1978 everyone!

NOTES FROM THE SECRETARY'S MINUTES

By Sandra Phillips

The Nominating Committee presented the following slate of officers for 1978: President, Robert Phillips; 1st Vice President, Olive Sain; 2nd Vice President, Robert Larson; Secretary, Laurence Sain; and Treasurer, Arnold Mulzer.

Next year we will continue to publicize our program meetings through the local newspapers and radio stations. We have had new faces at the program meetings recently because of the publicity. We are happy to welcome Mr. Mark Bradbury of Marquette to our Club.

When we next fill out our application for the American Federation Merit Awards, all members should notify the Club of contributions they have made to the public during the year. Bob Phillips gave talks to students at Westwood High School in Ishpeming in November concerning the rockhounding hobby. Laurence Sain appeared on the TV program Upper Michigan Today with Carl Pellonpaa on December 12; he talked on rockhounding and lapidary work. Ernie Johnson has had the Webelo Scouts to his home to see his collection of rocks and tour his basement. Frazier Tubbs gave a talk to the Marquette Historical Society on the Copper Country. George Bell has done work with Pete Kotila at the Bothwell Middle School in Marquette. I know other members have also made contributions of this sort, so please let us know about them.

The Christmas dinner held on December 18 at the St. John's Church in Ishpeming was delicious as usual. At a short business meeting following the dinner the Club unanimously voted to elect the Nominating

Committee's slate of officers. Following this short meeting, the Club enjoyed a very interesting talk given by Burton Boyum on the Carp River Forge project.

The table centerpieces, made by the DePetros and the LaChances, were made out of cactus wood and a pen set was included on each one. These were given as door-prizes. Cindy Waters, daughter of Mr. and Mrs. Charles Waters, drew the winning names for the centerpieces. They included Marion Short, Carl Gutman, Frazier Tubbs, George Bell, Bob Markert, Faustin Anderson, Eleanor LaChance, and Elizabeth Waters.

Additional door prizes were donated by Bob and Marian Markert, Arnold Mulzer, Bob Phillips, and Laurence and Olive Sain. Recipients of these prizes included Laurence Sain, Scott Bowns, Theresa Bemis, Mrs. Korby, Bart Bartelli, Mamie Jarvi, Arnold Mulzer's daughter, Joe LaChance, Barbara DePetro, Charles Bemis, Doris Mulzer, Dorothy Bowns, Francis De Petro, Bob Phillips, and Doris Garceau plus four women who were working in the kitchen.

Joe Vachon, one of our junior members, drew the names for these door prizes.

Although my term as secretary is over this month, I look forward to seeing all of you at the meetings. Happy New Year!

BITS AND PIECES

By Arnold Mulzer

If you want to know where the world's largest liquid tanks are being constructed, so no further than the Tilden Mine.

Here are some Tilden facts. Eight hundred ton of pellets are manufactured every hour, with only one phase in operation; phase two will come on line this fall, and phase three is already planned. When completed, its yearly production will be 12 million tons and will be the largest producer in the United States.

Our L S & I ore docks at Marquette ship about six million tons in a good season.

Marquette's television tower was once located on one of the higher hills in Marquette County. Now this hill is being mined and some day it could become the county's deepest hole. If you ever get an opportunity to visit this complex, and I hope you do, you won't find any wooden ties in the several miles of railroad tracks. They are a steel type already bolted to the rails. Shipped in 46 foot lengths, this shipment alone was over 300 railroad cars.

To see the magnitude of the Tilden, you can get to the Tilden Overlook by taking Cliffs Drive between Negaunee and Ishpeming past Suicide Hill and several lakes, which incidentally are the city of Ishpeming's water supply. The road is not too good, but the view is great. Continue on the road and you will come out at National Mine.

From the Cliffs News we learn of the promotion of two Club members. Burton Boyum becomes Assistant Manager of Administrative Affairs and Bob Phillips advances from metallurgical engineer at Republic Mine to Research Coordinator Flow-Sheet Development.

In checking over our adult members of the Ishpeming Rock and Mineral Club, I find that 41 have Marquette addresses, 26 are from Ishpeming,

Negaunee, and Republic, six are from Gwinn, and 17 are out of county.

I have had orders for three Club badges for some time, hoping to get more, but I guess I'll send in the order before the Croners start checking on me.

Remember that dues are due. Pay by April 1 to get your name in the JASPILITE membership list.

A TRIBUTE TO FAUSTIN ANDERSON

We were all saddened by the death of Faustin Anderson, 76, on December 28, 1977. Faustin was a very active member in our Club for the past three years, and he will be remembered for his friendliness and love for rockhounding. The members of the Ishpeming Rock and Mineral Club wish to extend our sincere sympathy to Faustin's family.

As a tribute to Faustin I would like to print some excerpts taken from the September, 1977, issue of Rock Trails which reflect the feelings people felt when they met Faustin Anderson.

... "I wanted to tell you about the two special people we met at the Ishpeming swap. The first one I will tell you about I think is a little bit over 65. . . tall, thin man, a rockhound that makes friends easily. . . Faustin Anderson - and I would call him a Specialist in Copper because on May 28, 1977, he found a piece that weighed 150 lbs!"

The article goes on to describe how Faustin and Lilly got the copper into the trunk of his car. It was a reprint of part of Faustin's delightful article called COPPER IS EASY TO FIND--

OR IS IT? CAN YOU GET ENOUGH--OR TOO MUCH? which appeared in the July JASPILITE.

The other "special" person mentioned in the article was Pete Hansen, whom they referred to as a "celebrity." This was because he had just competed in a whistle-tooting contest at the National Railroad Museum in Wisconsin.

CALENDAR OF IRMC MEETINGS

February 3 (Friday)--Business meeting, 7:30 p.m.

February 19 (Sunday)--Program meeting, 2:00 p.m. Silent Auction

March 3 (Friday)--Business meeting, 7:30 p.m.

March 19 (Sunday)--Program meeting, 2:00 p.m. Dr. Fillmore Earney, Professor of Geography at Northern Michigan University, will speak on mining on the Marquette Range.

April 7 (Friday)--Business meeting, 7:30 p.m.

April 16 (Sunday)--Program meeting, 2:00 p.m.

A LETTER FROM MARION AND NELSON SHORT

As some of you already know, Marion and I are returning to our home in Howell for a short time, and then hopefully on to the Southwest until spring. Whether we will be back up here again is uncertain; it depends on the work situation. We wish to thank everyone in the Club for being so kind and showing us such good times in the past year.

It has been a real pleasure meeting such nice friends as the Sain est

8

people--Larry and Olive Sain-- and also the cleanest people--Frazier and Dorothy Tubbs, and all of you, the nicest people on earth. We will miss you all. Whenever you are in the Howell area, look us up, you are always welcome. The latch string is out and the coffee is instant. Thank you all again.

Marion and Nelson Short

IN THE HOSPITAL

I am sad to report that Edith Anderson is very seriously ill at Marquette General Hospital South. Anyone wishing to send cards, her room number is 316. I am sure Edith would appreciate hearing from you and being kept up to date on activities.

Edith and Ray our thoughts and prayers are with you.

AMERICAN FEDERATION AWARDS

By Frazier and Dorothy Tubbs

Your attention is called to the article in the January Midwest Federation Newsletter titled "All America time is here again."

It is that time when we want everyone of you to brag about your activities associated with our rock hobby during the past year. "Don't keep your light under a bushel basket." Tell us what you have done to promote our hobby among friends, neighbors, schools, youth, church, civic and historical groups.

We know what our Club has accomplished, and as a group we have done quite a few things in 1977. But your personal activities as a member of the Ishpeming Rock and Mineral Club are important too.

Do you have any newspaper articles, thank-you letters or pictures about the things you have done? Any pictures or publicity about the club activities? If you do have any of these, please let us borrow them long enough to make copies. How about pictures or slides of our Swap and the Memorial Weekend field trips? Did anyone take pictures on the field trip to Escanaba for satin spar?

If you don't do some bragging, we won't know what you have done. Then we won't have the material we need to use in filling out the entry form. If you will tell us you will save our making a lot of phone calls. Otherwise, we're going to have to call you and get the information we need.

Please call us or one of the club officers right away! You may think we have lots of time but March isn't very far off with the days passing as quickly as they do, and it takes time to get the entry blank all filled out correctly. Our telephone number is 475-4954.

MY TRIP TO BELIZE

By Sheryl Johnson

Note: Belize is a small developing country with a population of about 130,000 (1975). It is bordered on the North by Mexico, the West and South by Guatamala, and the East by the Carribbean Sea. Its people are mostly Afro-Belizeans (Creos), Mestizos, Maya Indians, Afro-Caribs, Mexicans, Asians, and Europeans.

* * * * *

This past summer I was chosen to be part of the Michigan 4-H Work Adventure project to Belize. We left Monday, August 1, from the Lansing airport to return back the evening of Tuesday, August 23. Five people

from Michigan took part in the project this year. They included another girl and two boys of 4-H groups from downstate, myself, and our adult leader from the State 4-H Office in Lansing.

The first week we were in Belize our group worked at the 4-H Centre just outside of the capital city of Belmopan. We were to help build the two-story dormitory, but when we arrived the foundation had not been started yet, so instead we 'tamped' dirt for three, long, exhausting, but fun days. Besides this, we helped with other chores at camp such as slaughtering 50 chickens one morning and going to the lumberyard for wood for the dormitory.

That weekend we traveled to various cities. On Friday a reception was held for us by the mayor of Dangriga, a city 55 miles and three hours away. The reception that afternoon featured a group of children performing the native Creole dances. On Saturday our trip featured a visit to the famous Maya ruin, Xunantunich, and to the neighboring country of Guatemala for some shopping. Sunday morning we toured St. Herman's Caves about 25 miles from Belmopan and the Blue Hole, which is a fresh-water pond with the water flowing right out of the rock cliffs. In the afternoon we packed up everything, for we were to leave either that afternoon or the next morning for our individual villages.

Monday morning I left for the village in which I would be staying and working with 4-H'ers. The village I stayed in, Double Head Cabbage, was a typical Belizean village--no running water, no electricity, and much flooding. The home I stayed in had a gas stove but no refrigerator.

They also had a sink, bathtub and toilet in their bathroom which you would pour rainwater into to flush or to wash. They used kerosene lamps during the evening to see with or read by. But it was not really that bad because of the friendship these people were able to give.

While there I worked with two 4-H groups teaching crocheting, knitting, and small crafts. I also worked with the ladies group of Double Head Cabbage and of four neighboring villages teaching knitting. On Saturday there was a cricket game in Double Head Cabbage in which their team played the neighboring village of Willow's Bank with Double Head Cabbage winning. That evening a party and dance were held by the 4-H'ers in my honor, something which really made that week a memorable one for me.

Early Sunday morning we left for the 4-H Centre for a week at the 4th annual and largest 4-H camp. At camp this year there were about 75 people including campers, ranging in age from 8 to 19, from all over the country, staff and the five Michigan people. The craft projects this year included cow horn craft, string art, and puppet making. The campers also learned how to care for, what shelter is needed, what diseases occur, and how rabbits, chickens (both layers and broilers), goats, and bees would be useful to 4-H'ers. Besides the learning sessions we had games, sing-alongs, square dances, swimming, and of course a Talent Night. Camp was officially closed Friday afternoon with the campers receiving the certificates for "Camp Michbel" though no one would leave until Saturday sometime. Camp was a beautiful experience because the campers held so much enthusiasm for being able to be a part of camp, a dream to many of

them which came true. For many campers had never left their immediate villages or areas, probably never traveled such a long distance in a vehicle, and never been to the capital let alone to the 4-H Centre.

Our group had to leave camp on Saturday morning for Belize City, the largest (population about 40,000) and best-known city of Belize. That afternoon in Belize City a fishing trip to the Keys in the Caribbean Sea was arranged for a group to take part in. The two men which we were with did all of the fishing with air guns but it was fascinating just to be able to watch them. That afternoon and early evening, in less than four hours, the two of them caught between 50 and 60 pounds of fish, five or six lobsters, six Conch shells, and a Barracuda. We returned that evening to the Prime Minister's Lodge where we would be staying for our three-night stay in Belize City and to our private cook and her helper.

On Sunday our group took a trip to Altun Ha, another Maya ruin in Belize. It was not as elaborate as Zunantunich but it was just as fascinating. That afternoon nothing was scheduled for us so we just walked around town. Although nothing was open, it gave us a chance to relax for the first time on the trip. On Monday the schedule included only two things--shopping and packing. That was our day to buy whatever we wanted to bring back and had room for, for we would be leaving the next morning.

We arrived in Lansing Tuesday evening to greet all of our families, though we were a family ourselves after spending 23 days together.

Editor's Note: Sheryl Johnson is 17 years old; a senior at Marquette Senior High School; and has been a junior member of the Ishpeming Rock and Mineral Club for over five years. Sheryl is the daughter of Ernie and Helen Johnson. I would like to thank Sheryl for taking the time to submit to the JASPILITE this very informative and interesting article. It sounds like a very exciting and memorable trip.

ROCK HOUNDING AND REMINISCING

By Laurence Sain

Last summer several couples from our Club were in attendance at the White Pine Gem and Mineral Show. Those in our group who were camping included the LaChances, DePetros, Bartellis, and Olive and I. In the course of visiting, viewing, purchasing, and very little swapping, we heard that a great deal of mine rock was being moved in the Norwich area to put a lift on the Norwich road. We also heard that copper and silver specimens could be found in abundance as a result of this movement of poor rock piles.

Of course it was too late to go there that day so we all moved on to the nearest campground which was just west of Silver City, Union River Campground. This was a very nice, quiet place to camp. It was a successful place for Tony who found a beautiful specimen of copper with a drill hole on the lake shore where mine rock had been dumped to prevent the lake from eroding the shoreline. I'm certain that most of you have seen this unusual specimen on exhibit at one of our meetings.

It was also an excellent place for Ingrid who found a silver-bearing rock in the same area. Perhaps in the near future we'll see samples through her microscope.

continued.

That evening we made plans to visit the Norwich area the following day. In the morning we drove back to White Pine and took the Walsh Road, from which we found the U. S. Forest Service road leading to the Norwich. It is a good gravel road but a bit dusty when dry. Ask those who followed us. However, it is much shorter than driving around by Bergland or otherwise by Ontonagon. Rock hounds can't waste valuable time.

When we arrived at the Norwich, we discovered that much poor rock had been moved but that many people were there hunting and many more had been there previously so that the abundant specimens we had heard of were few and far between. We did find some specimens in copper and had fun hunting. We also visited the old cemetery where many of the old settlers were buried. Some of the names, such as O'Rourke and Livingstons, were familiar names to me as I had been born and raised in Ewen some 25 miles away. We also had an opportunity to visit with one of the older citizens of the area, Mr. Batkins. He, his brothers, and family had been residents of the area for many years. He spoke of several other adits than the main one and several other poor rock piles. We didn't find them all.

As we visited with him and viewed these ancient sites, many memories began crowding into my mind. Memories of over a half century ago. Memories of long before I had any inclination of becoming a rock hound, and then, too, more recent memories.

Well, I remember as a youngster growing up in Ewen of how we used to all pile into our 1924 Star Automobile on a Sunday after church. Mother would have a

picnic lunch ready and we would make a trip around the horn. We would stop along the way for our picnic, usually at the foot of the Military hills or at the Norwich.

The trip around the horn was some 70 miles and would take all afternoon. In fact it would be quite late in the evening when we arrived home. This meant traveling to Ontonagon on what is now U. S. 45 and back by the Norwich road which meets M-28 at Matchwood seven miles west of Ewen--either that way or we reversed the procedure.

Anyway, we always managed to stop at the Norwich. We didn't stop to pick rocks but just to allow four boys to work off some of their excess energies and to explore the old town site. At that time there were quite a few old buildings around. The school, dilapidated though it was, was still there. Many of the old log houses were still there. There was also the old adit of the mine. I remember on one trip we found some dynamite caps that hadn't exploded and some fuses. My uncle showed us how dangerous they were by setting some off on a huge boulder. It was enough to impress on us that we shouldn't monkey around with them. Memory also recalls that on one trip another car ran into us on the narrow rutted road and tore off our running board. Perhaps many of our readers never saw a Star Car or know what running boards are. The other car broke his crossrod, and they wired it together with an ax handle and haywire. As the road was full of ruts, he couldn't get off the road anyway. He made it back to Matchwood where he lived.

Other memories keep crowding in. Several years later as a Boy Scout our troop camped at the Norwich for a whole week. We were camped right at the old Townsite. The skeletons of log buildings surrounded our

tents. We were camped about a half mile from the river and each morning we were awakened at 6:00 a.m. and went down to the river for a swim before breakfast. We were wide awake when we came back even though we stumbled sleepily on the way down. The water was cool and refreshing and helped build up a healthy appetite.

We didn't always get a good night's sleep as there was often some skullduggery going on. Right next to our tent was a huge log building of two stories which had been used as a Club House in its heyday. One of the fellows in our tent had made a horn of birch bark and could produce a very ghostly sound through it. Several of us were in on it and hid the horn upstairs in the old house. One night after lights out we waited until everyone was asleep and sneaked upstairs where Nello performed on his horn. It certainly was a ghostly sound at that hour of the night. The whole camp was up with flashlights trying to determine what it was. We had sneaked down the back way and joined them. They never did find out that night. Many thought it was the ghost of the old miners.

I remember the adit of the old mine. It was all coated with ice. We used it as a refrigerator to keep our perishable foods. We never ventured in very far because it was like walking into a walk-in freezer.

Other memories of a later date crossed my mind. The first teaching job after marriage was in the rural school just about a mile away called the Norwich School or Livingston School. I taught there a half year and Olive finished out the year even

getting caught in the terrible March storm of 1938. However, she made it home. The following year we were granted permission to fix an apartment in the rear of the school if Olive would teach there and I would drive to Maple Grove. We only took food for the week. One week we were snowbound from Tuesday to Saturday. Last meal before we got out was cheese and crackers. Then we had to drive around by Ontonagon to get to Bruce Crossing.

A very recent memory of this same group including the Andersons. We had visited the Norwich Mine area just a year or two before. Tony found a miner's candle lamp with the candle still in it. Some of us climbed the south side to an opening above the adit. We also climbed to the top stopping at many crevices that had been explored. We finally reached the top and the fire tower. Here we discovered that there was a good road coming up the other side so one could drive to the top.

We started back down, examining poor rock piles on the way and got separated. This was the day that we lost Bart or he lost us. We never have been able to determine which. Also, Tony got into poison ivy.

Soooooo. . . .you can see rock hounding isn't all rock picking. Often it can be very entertaining otherwise and bring back plenty of pleasant memories of by-gone years.

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CALENDAR OF EVENTS

- March SHOW Grand Rapids Mineral Club, Grand Rapids Public Museum, 54 Jefferson SE, Grand Rapids, Michigan
- March 18-19 SILENT AUCTION Roamin Club, Bentley High School, Livonia, Michigan
- April 7-8 SHOW Flint Rock and Gem Club, Williams Community Education Center, Flint, Michigan
- April 16-17 SHOW South Cedar Valley Rocks and Minerals Society, Inc., Hawkeye Downs Ex. Hall, 4400 6th St. SW, Highway 218, Cedar Rapids, Iowa
- April 22-23 SHOW Mount Clemens Gem and Lapidary Society, Seminole School, Mount Clemens, Michigan
- April 23-24 SHOW Wisconsin Geological Society, Red Carpet Expo. Center, Milwaukee, Wisconsin
- April 30-May 1 SHOW Blue Water Lapidary Society, Wagenseil Community Center, 2300 Totem Trail, Port Huron, Michigan
- May 15-20 SHOW C.A.I. Family Lapidary Club, Pontiac Mall, Pontiac, Michigan
- May 19-21 SHOW Midwest Mineralogical and Lapidary Society, Dearborn Youth Center, Dearborn, Michigan
- May 27-29 FIELD TRIP Ishpeming Rock and Mineral Club, Copper Country Field Trips, headquarters McLain State Park, open to Midwest and American Federation members. For information contact Frazier Tubbs, 2 County Road 510, Negaunee, Michigan, 19866, or call 475-4954
- May 27-29 SHOW Chicagoland Gems and Minerals Association, DuPage County Fairgrounds, Wheaton, Illinois
- June 24-25 SEMINAR Michigan Geology and Gemcraft Society, Fourth Annual Educational Seminar, Harrison, Michigan
- August 5-6 SWAP Ishpeming Rock and Mineral Club, Marquette City Tourist Park, Marquette, Michigan

Did you know? Silica gives firmness to the stalks of grasses and the stems of trees. It is quartz on which we cut our fingers when we draw grass blades through them.

Excerpt from "Quartz Family Minerals" from Flint Chips via the Agate Picker

SOAPSTONE

The Chinese have treasured soapstone for centuries and used it to carve their delicate figurines. The Eskimos use it to make lamps and cooking pots. In ancient Babylon, it was used to make signet rings and other items of jewelry. In North America, the early pioneers used it to make laundry tubs. But this is not why it was called soapstone. The mineral gets its name because the waxy polished surface looks and feels like soap.

Geologists classify soapstone as a hydrous magnesium silicate and call it a steatite mineral related to talc. Its main ingredients are magnesium oxide, silicic acid, and moisture. It is one of the softest of stones, easily polished to shine with a waxy gloss and easily carved with a knife. Its color may be pearly or bluish gray, milky white or pastel yellow. A few rare samples are a vivid apple green. Some are opaque, others are translucent like foggy glass.

Since early times, artists have treasured its lovely colors and soft carveable qualities. It makes durable lining for boilers and electric furnaces because it insulates both heat and electricity. It resists all stain and corrosion. As a filler ingredient, powdered soapstone gives body to certain papers and paints and a spreading quality to face powder.

Soapstone is classified as a metamorphic rock, a mineral completely altered from its original form by tremendous forces within the earth's crust. The original mineral was most likely lava, rich in magnesium and silicates fused in the furnace of some ancient volcano. For ages it was

buried amid the seething activity of growing mountains. Steaming underground water and enormous pressures gradually remodeled and refined its texture. The original mineral was metamorphosed, completely changing into something quite different. The various colors were added by traces of magnetite, chlorite, mica and other ingredients that seeped into the recipe.

Considering its long history of hardships, it is not surprising that soapstone has learned to resist heat, electricity, and corrosive acids. But it is surprising that the lovely soft material is not marred by its past experiences.

Most of the world's steatite minerals are mined in North America, and both soapstone and talc, its somewhat softer relative, are found in the western mountains of California. More massive deposits are in the eastern Appalachians. Near Schuyler, Virginia, the soapstone mines are along a belt 30 miles long and occur in blocks, some thicker than 300 feet and more than 1,500 feet long.

From Hells Canyon Gem Club
Bulletin via The Oshkosh
Quarrier

CARVING SOAPSTONE

In working with soapstone, it is best to start out with the proper tools: a knife, a good piece of soapstone, a hard table, and maybe some rasps and files, some sandpaper and emery cloth of different grits. It is also best not to start until you have a good idea of what the object will look like when finished by making some sketches on paper first. Reading books on carving in general will be a boost (and get advice from fellow club members with experience in carving).

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The less pressure you have to put on a rock to make a mark, chances are the better the finished product will be. Excessive pressure results not only in tired arms, but in fractured end pieces, ruined or unfinished projects, or, if finished at all, finished at a great cost in strength, patience, and time. So, for the best test when choosing a good piece of soapstone to carve, use what is known as the old fingernail test. If your fingernail can easily scratch it, and it has a nice appearance, chances for success in the finished product increases.

Finishing Touches: After the carving has been shaped to your satisfaction, if a good finish is desired, first sand very thoroughly with a 220 grit sandpaper or emery cloth. After all scratches are removed, sand again with 400 grit wet or dry emery cloth. Then give a final polish with 600 grit wet or dry emery cloth. You will get better results if the 400 and 600 grit sanding is done under running water. After the carving is dry, rub with boiled linseed oil (any kind of oil will bring out the color), or immerse it in the oil for one or two days. Immersing gives a darker color and lasts much longer. When the carving is taken out of the oil, dry with paper towels thoroughly and the next day rub and polish with paper towels or cloth. Polishing off and on for several days gives an even better effect. Fractures may be repaired with epoxy glue.

Soapstone, then, has its many uses, both for jobs that need to be done in our modern world and in artistic expression. This mineral may be a hard form of talc, but it is very soft in comparison to other minerals. When soapstone combines with different

rocks it can turn into quite an interesting, unusual, and beautiful showpiece. It carving soapstone, one thing to keep in mind is not to give up if the first one is not a success.

(For most of the carving and finishing information I am indebted to HILLS SOAPSTONE, Box 766, Palmer, Alaska 99645)

Marjory Frank, Rock Ramblings
via The Oshkosh Quarrier

TUMBLING ABALONE SHELL

Have you ever wondered how to tumble abalone shell?

Tumble abalone shells in fine sharp quartz sand and enough water to barely cover for 24 to 36 hours. Wash out thoroughly and dry. Replace the shells in the tumbler and add 1 lb. of tripoli for each 50 pounds of shells. Tumble this mixture for 12 to 15 hours. Again, thoroughly wash everything and dry the shells well.

Next, charge the drum to half-full and add enough hardwood sawdust to keep the shells from bumping. Run this mixture dry for 2 to 3 hours. Wash well, clean off sawdust, and have beautifully polished shells.

From the Rockorder via The
Pick and Shovel

NINE UNUSUAL WAYS TO USE SALT

Salt, the very common mineral called halite, is a cheap cure-all for household use. Here are some examples:

1. Eggs with cracked shells can be cooked without their contents oozing out if a teaspoon of salt is added to each pint of water.

2. Nutmeats will come out of the shell whole if the nuts are soaked overnight in a salt-water solution.
3. Cream will whip faster if a pinch of salt is added.
4. Food will cook faster in a double boiler by adding salt to the water in the bottom container.
5. When cleaning fish, rub salt on your hands first to keep the fish from slipping.
6. Add a few dashes of salt to the water of cut flowers. They will last longer.
7. Fill a nail hole in plaster walls by making a putty of equal parts salt and starch mixed with enough water to make a stiff dough. You can paint over it.
8. Help clean the soot from your fireplace chimney by throwing a handful of salt into a blazing fire.
9. To brush your teeth, use a little salt on the toothbrush or use a mixture of salt and baking soda.
10. For quick action from bee stings, mix salt, soda, and vinegar and apply to stings.

From the Michigan Lapidary Society Bulletin

THE UNIQUE POWERS OF TURQUOISE

Anselmus de Boot, court physician to a seventeenth century emperor, found himself, one night, traveling a very narrow and dangerous road. His horse stumbled. De Boot was thrown to the ground and, while neither he nor his horse were injured, he found that a piece of turquoise from his ring had broken off.

Another time, while lifting a heavy pole he felt a sudden stabbing in his side and heard his ribs crack. His injury was only a sprain but this time his turquoise had broken into TWO PIECES. He began to believe the legends which said turquoise would not only protect the owner's horse from tiring, from the ill effects of drinking cold water when overheated, but it would also protect the wearer from falls and injuries.

Today, de Boot would be astonished to see turquoise owners taking their stones for granted or oblivious to the magical properties they possess. Do you know, for instance, that turquoise also protects its owners from falls over cliffs or from crumbling walls? The logic is simple, according to one physician who practiced centuries ago. "Whoever wears a turquoise so that it, or its gold setting touches the skin may fall from any height and the stone attracts to itself the whole force of the blow, so that it cracks and the person is safe."

Remember now, these are magical powers SUPPOSEDLY possessed by turquoise. Remember this especially before jumping from a high cliff clutching your turquoise.

Russians once believed that turquoise would protect them from fatal wounds. Arabian and Persian turquoise owners believed it would dispel fear and protect the wearer from drownings, lightning, snakes and scorpion bites. The people of India believed the stone everted evil and banished unpleasant dreams. The Kings of Damascus, meanwhile, were convinced that turquoise stones worn on the neck and hands would keep them from being killed. "Have you ever seen turquoise on the hands of a dead man, they asked, ignoring skeptics who suggested it had probably been stolen.

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With all the wonderful medicinal properties attributed to turquoise, it's a wonder its owners ever managed to die and leave it to someone else. Turquoise has been recommended as a cure for melancholy, hernias, dyspepsia, cancerous sores, and insanity. It can, some say, remove poison and heat from the liver. Having trouble with ulcers? Turquoise can help there. It also is supposed to relieve and prevent headaches. The priest in the Exorcist missed his chance when he ignored the properties of turquoise. He must not have known that it will drive away pain caused by "demoniacal or evil influences."

Turquoise is effective when treating all diseases of the head and heart, according to legend, and combined with other ingredients will relieve pains caused by assault and epilepsy. When cut into shavings and moistened, the stone helps feebleness and nausea.

When it comes to eye problems, however, turquoise really excels. Broken membranes in your eye? Turquoise can "glue" them back together again. It is said to have the power to repress growths such as warts and pustules. It "brightens and refreshes the vision when looked at fixedly," and can be used as an eye salve. In Afghanistan it is said that when a turquoise ring is dipped in water and applied to the eye, it will cure cataracts. If you happen to be driving at night in Arabia or Persia, turquoise can cure night blindness as well as increase the luster in them.

Turquoise owners today might do well to heed the above and save a few doctor bills. If turquoise becomes moist and changes color, there is a chance it is in the

presence of disease or poison. If the stone does grow pale on the finger of a sickly person, by transferring it to a healthy relative or friend he at least saves the ring as the beautiful blue color will be restored. It is said that once the owner of a turquoise ring died and immediately the turquoise lost its luster. A relative, therefore, passed up an offer to buy the faded ring but soon regretted his actions because as soon as another person bought it the stone regained its color. It could happen to you.

The sensitive turquoise is also an excellent barometer of character. In Germany, when given to a lover, its color will remain the same as long as the lover is true. The turquoise cannot be fooled. It will fade if the love fades. It also is said to lose all power and color when worn by an immodest or lewd person, but lest anyone rush to hide their faded turquoise it must also be pointed out that it loses color when the weather changes! It will also change color during the day so the very observant may use it as a sun dial.

For those of you who are early risers, if you look at your turquoise the first thing, you will pass a fortunate day and be liked by everybody. For those of you who can't make it up that early, the owner who looks at the moon and his turquoise on the first day after a new moon may not be so popular but he will escape evil and become the master of fabulous wealth.

If anyone believes all these legends, then surely no other stone can do as much, plus inspire young girls to blush and think good and sincere thoughts. It also brings boldness and graciousness to its owner, reconciling fighting husbands and wives, as well as cheer and comfort to the

heart insuring liberty and justice for all.

Submitted by Dick Bogard,
The Arizona Highway, via
Arrowhead News

WORLD HISTORY OF GOLD

From before the dawn of recorded time, gold has gripped mankind's heart and soul in an enduring and passionate embrace. Immense treasures of solid gold were buried with the Scythians in their tombs on the vast steppes of Russia. The early Egyptians worshipped the radiant yellow metal for its kinship to the glowing sun--source of all life to them. And the ultimate in the dream for gold was expressed by the legendary King Midas, who asked that all he touched be turned to gold.

Even today in such widespread parts of the world as the Orient, India, and Europe, gold is appreciated for its absolute permanence and value. For gold, unlike any other metal, is not only beautiful, it is indestructible.

And it is incredibly rare. Imagine, all the gold ever mined in the entire history of the world could be stored in a single warehouse just sixty feet square and only seven stories high!

When the Conquistadores set out for the New World in 1511, King Ferdinand of Spain had only one command for them. "Get Gold," he ordered, "humanely if possible but at all hazards get gold." For he knew that governments may topple, populations may be dispersed, but gold goes on, its beauty and its value untarnished by the ages.

Is it any wonder then, that the greatest artists the world has ever known have so often chosen this imperishable and exquisitely beautiful metal for the full expression of their genius.

The United States is the fourth largest gold producer in the world, whose production last year was worth 194 million dollars. Since 1970, when the U. S. abandoned the fixed price of gold, the value of gold has soared many times over, fed by a rush into the precious metal by millions of people seeking to protect themselves from inflation.

But the main Gold Rush for Americans began in 1848 when gold was discovered by James Marshall in the American River near Coloma, California. Uncontrolled by governments or large companies, the metal was free for the taking. A year later 40,000 adventurous miners had swarmed to California by sea and 6,000 covered wagons had made the trip overland, with 5,000 persons losing their lives on the trip. By the mid 1850's the easy to get out "surface" gold was gone and the rest was in hard to mine veins in the Sierra Nevada. The largest of these was the Mother Lode, a sweep of gold-bearing ore over 100 miles long and measuring from several hundred feet to about two miles wide. Today the U. S. Treasury is No. 1 in world gold holdings, with a total value of 49 billion dollars.

Canada is the second largest country in the world after the Soviet Union and is the world's third largest gold producer. Last year's production was 53 metric tons worth \$303,000,000. This vast country was the site of the last great gold rush.

It began in 1896 with a strike on the Klondike tributary of the Yukon River, and quickly a town sprang up where there had been nothing before:

Dawson. By early 1897, 100,000 eager hopefuls had started out for Dawson, but only 30,000 to 40,000 got there. The Mounties turned back at gunpoint all who didn't have at least a year's supply of food with them. For the land was bleak and inhospitable. The way was strewn with dead pack horses. It is said that at the height of the gold rush a saloon keeper could sweep up \$275 in gold dust each night from the sawdust on his floor where it fell from the miners' pockets. Yet an egg was often impossible to buy at any price. Four years later the rush was over.

In 1652, the first Dutch settlers arrived in South Africa and established Cape Colony. In 1814, after the Napoleonic Wars, Britain gained final possession of Cape Colony. Fifteen years later, in a dispute over the colony's true ownership, the Boer War broke out between Britain and the Boers (descendants of the original Dutch settlers who speak Afrikaans, a Dutch dialect). The English won. In 1861, South Africa became a republic and formally withdrew from the British Commonwealth.

In 1866, an out-of-work prospector named George Harrison discovered gold on a farm near what is today Johannesburg, for which he received \$30 in thanks by the grateful farmer on whose land it was. Today, South Africa is the world's largest gold producer, mining more than half of the world's total gold output. Last year over 400,000 workers labored to produce 729 metric tons of the noble metal, worth 4.2 billion dollars on the open market. To do this they had to bring to the surface nearly 73 billion tons of gold bearing ore,

often from as far as two miles underground!

The Soviet Union is the largest country in the world and the world's second largest producer of gold after South Africa. However, a century ago they were first, with discoveries in the Uran Mountains that were producing 60% of the world's total supply in 1847. The Russian mines were owned by the Czars who became fantastically wealthy. The great palaces and churches of the Kremlin were lavishly decorated with gold, inside and out, and Moscow soon became the chief goldsmithing center. The greatest jeweler of them all was Carl Faberge.

Each year Faberge made a fabulous golden Easter egg for the Czarina, the outer shell of which was enameled gold. The egg opened to reveal a golden yolk which itself contained a tiny golden hen. Inside the hen there was a diamond reproduction of the Imperial Crown in which was hidden a ruby pendant. Experts estimate that the Soviet Union mined 371 tons of gold in the past year, worth 2.13 billion dollars.

Australia is the seventh largest gold producer in the world today, mining \$90 million in gold last year. It all began with Edward Hargraves, an Australian prospector who had previously joined the great American Gold Rush to try and make his fortune. While in California, he noticed great geological similarities between there and in his native country. He returned to Australia and within the space of just one week discovered gold. In gratitude, Queen Victoria awarded him with a life pension and \$10,000. The discovery drew 357,000 people to Australia in 1852 alone and did much to help settle the land. In 1872, the largest gold nugget ever

discovered was found in Australia. It weighed 160 pounds!

Formerly the southern part of the Netherlands, Belgium has been an independent nation since 1830. In 1885, King Leopold II of Belgium became absolute monarch and owned, as his personal property, the vast Congo Free State, with an area 88 times larger than Belgium itself. Later, after years of mismanagement, the King was forced to cede the incredibly rich territory to the Belgian nation. Belgium's wealthy past can be seen today in the Brussels town square, Grand Place where the extravagant buildings are brilliant with color, mural paintings and seemingly acres and acres of gold. Even today Belgium's official gold holdings are more than that of all of South America combined.

(To be concluded in the April JASPILITE)

From Rok Tok via Alaska
Pebble Patter and the Flint
Rock and Gem Club Newsletter

WHAT ARCHAEOLOGISTS DO:

By Beth Habbersett
Age 13, 8th grade

Archaeology is the study of the remains of ancient civilizations. An archaeologist is a person who looks for artifacts that are from the ancient civilizations to help us understand the past. The main things he is trying to find out are the tools used, weapons used, pottery made, money used, sculptures made, the way they buried their dead, and what materials were used to build houses and harbors.

An African tribe scratched a multiplication table on a bone 7,000 years ago. In what is now called

England, during the stone age there were "factories" making stone axes. Egyptian women, 5,000 years ago, wore as much makeup as any Hollywood star today. Four thousand years ago the Cretans played a game something like checkers, saw circuses, and they had cafeterias to eat in. The Romans were wearing clothes made of pre-shrunk cloth. All of this was found by archaeologists, but not without the help of the right tools.

Supplies have to be bought for the camp and workers have to be found. It is the foreman's job to make sure that nobody steals anything found while digging. The size of the site may be big or small depending on what they are looking for.

Some of the tools they use are: spades, picks, shovels, a hoe-like tool called a marr, there is the spoon, knife, paint brushes, trowel, screening (to sift the dirt) and cameras. Once they have all they need, they find natives to work for them. Sometimes the archaeologists even have their families there to help them.

Johann Winkelmann, born in Germany in 1717, spent most of his life as an art historian in Rome and he is often called the "Father of Archaeology." In his book, he wrote that by no people has beauty been so greatly esteemed as by the Greeks. People who have followed in Johann's ways have little to do with anything but Greek, Roman, or Biblical Land history, but there are many other types of archaeology.

Some of the different types of archaeology are Anthropology, Fine Arts, Classical Arts, Natural Science, Biblical Study, Social Science and Art History.

Archaeologists are trying to prove that there was a flood and other

events that are said to have happened in the Bible. When Sir Leonard Woolley was working at the Ur site, they found an unusual layer of silt that was about ten feet deep. At first they thought it was from the spring floods from the Euphrates River, but then realized that it was too high above the river. The only solution was--the great flood talked about in the Bible. When they excavated in other areas, they found the same type of layer. The flood had covered an area 400 miles long and 100 miles wide. By looking at a map of that area today, we would say the flood was local, but people then thought it was the whole world.

Archaeologists can't understand about what they find unless they have had a general education, some natural science and history. It also may help them to know some German and French. Other languages may be needed if they are going to a place where it was or is spoken.

Archaeologists have found a lot out for us and they are still finding out more. Archaeologists have dated artifacts back a long time and are helping us to understand and learn about the past.

From The Tully

Editor's Note: We rarely see an article written by a young rockhound, but it certainly is a pleasure when we do find one. I think this article was great, very informative and interesting. Keep up the good work.

DON'T FORGET THAT YOUR IRMC DUES ARE DUE. PLEASE PAY EARLY TO INSURE THAT YOUR NAME GETS ON THE MEMBERSHIP LIST IN THE APRIL ISSUE OF THE JASPILITE.

HINTS FROM HERE AND THERE ON DISPLAY CASES

A well-displayed case will draw attention immediately. It isn't always what's in the case, but rather how it looks to the viewer.

Over-crowding can be a bad offender. The "cluttered" look will stand out rather than the excellent specimens shown. It is far better to have fewer items in a case; however, too many small items are just as uncomplimentary as the over-crowded case. Balance is something to be considered.

Linings can also be distracting, especially if they do not compliment the contents of the case. Ruffling the lining can be distracting, too, overshadowing the specimens shown.

Clearly labeling your specimens can be very helpful for the viewer, provided the labels are not at different angles and are printed legibly and clearly. They should be laid flat and parallel to the front of your case. Also, be sure that YOUR name is shown where it can be easily seen. One hint on plastic labels - heat in the case may make the plastic curl.

Be sure the underside of the glass is clean. The hosts and hostesses will keep the topsides clean. There's nothing worse than viewing a beautifully displayed case with messy glass; and we should try to keep them as clean as possible. Glass cleaner and paper towels will take care of this problem.

From Ozark Earth Science News

Helpful Hint: To determine the hardness of a stone, mark it with an aluminum pencil. The fainter the mark, the harder the stone. No aluminum mark can be made on a stone harder than 7.

CRYSTALLOGRAPHY--ISOMETRIC OR CUBIC SYSTEM

By E. D. Conner, M. D.

Frequency of Occurrence:

About 12% of known minerals crystallize in this system:

Copper, Gold, Silver, Galena, Argentite, Fluorite, Halite, Garnet, Magnetite, Analcite, Leucite, Pyrite, Uranite, Zinc Blende, Tetrahedrite, Hauerite, Smaltite, Cuprite, Sylvine, Ullmanite are examples.

Definition: 3 equal axes all at right angles to each other

3 axes of 4-fold symmetry
 4 axes of 3-fold symmetry
 6 axes of 2-fold symmetry (diagonal)
 1 center of symmetry
 9 planes of symmetry
 ---3 acial planes
 ---6 diagonal planes

The best clues for recognizing Isometric crystals are: 1) Cube-like or ball-like development and 2) Characteristic face shapes. The neat, even spacing of faces in drawings is seldom achieved in real crystals, but it happens often enough to afford certain recognition in many instances.

Note how:--Squares and triangles predominate
 --4-fold symmetry appears when looking down on the axes of crystals
 --3-fold symmetry appears when looking down on the corner of the cube

Study garnet, pyrite, and galena.

Form Names - Useful Aids to Memory

HEXA = 6 faces
 OCTA = 8 faces
 DO-DECA = 2 + 10 = 12 faces
 TETRA-HEXA = 4 x 6 = 24 faces (4 on each cube face)
 TRI-OCTA = 3 x 8 = 24 faces (3 on each octahedral face)

HEX-OCTA = 6 x 8 = 48 faces (6 on each octahedral face)

Classes of Isometric System (Dana)

1. Hexoctahedral C 3A₄, 4A₃, 6A₂, 9I
 Forms: 1. Cube or Hexahedron (Galena, Pyrite, Halite, Fluorite)
 2. Octahedron (Magnetite, Spinel, Chromite, Diamond)
 3. Dodecahedron or Rhombic Dodecahedron (Garnet, Cuprite, Magnetite, rarely Diamond)
 4. Tetrahexahedron (on edges of fluorite)
 5. Trapezohedron or Tetraona: trisoctahedron
 6. Trisoctahedron or Trigona: trisoctahedron
 7. Hexoctahedron (Diamond, usually rounded)

2. Gydroidal 3A₄, 4A₃, 6A₂
 No symmetry, planes, or center

3. Hextetrahedral 3A₂, 4A₃, 6P
 Forms: 1. Tetrahedron, positive and negative (Sphalerite and Tetrahedrite)
 2. Trisetrahedron (Positive and negative)
 3. Deltoid Dodecahedron (Positive and negative)
 4. Hextetrahedron (Positive and negative)

4. Diploidal C, 3A₂, 4A₃, 3 P
 Forms: 1. Pyritohedron or Pentagoal Dodecahedron (Pyrite and Cobaltite)
 2. Diploid (Positive and negative)

5. Tetartoidal 3A₂, 4A₃
 Forms: Positive, right
 Positive, left
 Negative, right
 Negative, left

From Rock Trails

HEX-OCTA = 6 x 8 = 48 faces (6 on each octahedral face)

CRYSTALLOGRAPHY-ISOMETRIC OR CUBIC SYSTEM

By E. D. Connor, M. D.

Classes of Isometric System (Dana)

Frequency of Occurrence

1. Hexoctahedral C 3A4, 4A3, 6A2, 9A1
Forms: 1. Cube or Hexahedron
(Galena, Pyrite, Halite, Fluorite)

About 12% of known minerals crystallize in this system

THIRD CLASS

Copper, Gold, Silver, Galena, Argentite, Fluorite, Halite, Garnet, Magnetite, Analcite, Fe-

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oxide, Pyrite, Uranite, Zinc Blende, Tetrahedrite, Hematite, Smaltite, Cuprite, Sylvine. Ultramafic are examples.

January, 1978

THE JASPILITE

Ishpeming Rock and Mineral Club, Inc.

Sandra Phillips, Editor

405 South Rose Street

Ishpeming, Michigan 49849

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2 axes of 3-fold symmetry

2 axes of 2-fold symmetry (diagonal)

1 center of symmetry

9 planes of symmetry

--- 3 axial planes

--- 6 diagonal planes

The best clues for recognizing isometric crystals are: 1) Cubic-like or ball-like development and 2) characteristic face shapes. The next, even spacing of faces in drawings is seldom noticed in real crystals, but it happens often enough to afford certain recognition in many instances.

Mr. and Mrs. B. Markert
Rt. 1, Box 620
Ishpeming, MI 49849

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Study garnet, pyrite, and galena

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