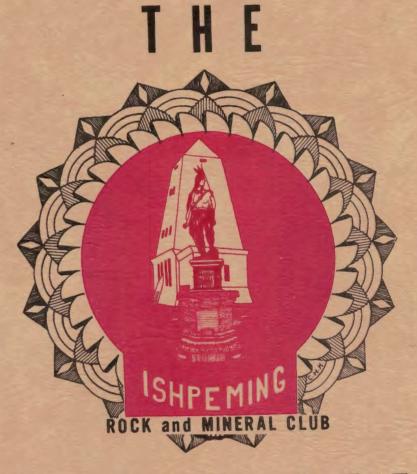
NOV 63



JASPILITE

Affiliated with the Midwest Federation of Mineralogical and Geological Societies

OFFICIAL PUBLICATION

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ISHPEMING ROCK & MINERAL CLUB, INC.

Published Quarterly

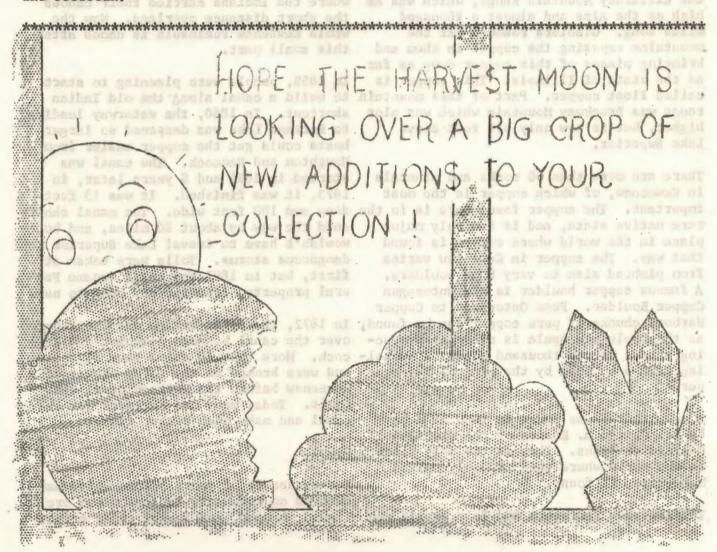
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Physical Aspects

The Keweenaw Peninsula is a finger-like point jutting about 75 miles into Lake Superior. It is the northern-most tip in Michigan and is called its "Treasure Chest!"

It was formed a billion and half years ago by volcanic action, so it is made mostly of lava flows. The rock formations found here are Pre-Cambrian; one of the oldest formations on earth. Extending from the southern border of Ontonogon County to the tip of the peninsula is a huge fault. This fault was caused by the shifting of one part of the ground away from the other. These faults take place along very large cracks or joints. Sometimes they form very scenic places such as along Brockway Mountain Drive and the Cliff Drive where they are very noticeable.

Once the Keweenaw Peninsula was made of the Killarney Mountain Range, which was as high as the Alps and almost a thousand miles long. Glaciers rounded off the mountains exposing the copper in them and bringing pieces of this copper down as far as the state of Illinois. This copper is called float copper. Part of this mountain range was Brockway Mountain which was alot higher, but is now only 650 feet above Lake Superior.

There are more than 60 rocks and minerals in Keweenaw, of which copper is the most important. The copper found here is in the deep and 100 feet wide. The canal shortrare native state, and is the only major place in the world where copper is found that way. The copper in Keweenaw varies from pinhead size to very huge boulders. A famous copper boulder is the Ontonagon Copper Boulder. From Ontonagon to Copper Harbor, chunks of pure copper can be found, so the whole peninsula is a copper-producing area. Eleven thousand miles of tunnel- cock. More than 40 ships have floundered ing have been made by the ming of the copper.

A new mineral was found in 1900 at Mohawk by Dr. George A. Koeing of the Michigan College of Mines. This is the only place in the world where this mineral, called Mohawkite, is found.

The Keweenaw Peninsula and Isle Royale are fished, hunted, and fought their tribal

the only places in the United States where greenstones or chlorastrolites are found.

The rivers and lakes are important only for fishing and boating. No large boats can travel these rivers, but the Portage Canal is used as a waterway through the Keweenaw Peninsula. The Portage Canal is the only important waterway in the Keweenaw Peninsula. Cargo ships can go through this canal instead of going around the stormy Keweenaw Point. The canal is made along an old Indian shortcut. Indians traveled by canoe along Portage Lake and Portage River and then they carried their canoes overland about a mile. It was much easier than paddling around the northern tip.

The Keweeno Portage, as it was called, was used by the French to cross the peninsula. The word Keweenaw is an Indian word meaning Place-where-we-make-shortcut-on-foot, which refers to the place where the Indians carried their canoes the short distance overland. Now the whole Keweenaw Peninsula is named after this small part.

In 1859, people were planning to start to build a canal along the old Indian shortcut. In 1860, the waterway leading to Portage Lake was deepened so larger boats could get the copper easier from Houghton and Hancock. The canal was started in 1865 and 8 years later, in 1873, it was finished. It was 13 feet ened the way by about 80 miles, and boats wouldn't have to travel Lake Superior in dangerous storms. Tolls were taken at first, but in 1891 the canal became Federal property, free for any boat to use.

In 1872, the first bridge was constructed over the canal between Houghton and Hanand were broken on the rocky shores of Keweenaw before the Portage Canal was built. Today many ore carriers use the canal and make much better time.

People

For thousands of years before white man arrived on Keweenaw, Indians mined ore,

wars. Copper was King is Keweenaw before the birth of Christ, when Indians mined it to make tools and to trade with other Indians far away. Earliest records of copper mining are found in prehistoric "Indian" pits and a book published in France in 1636. Evidence found in the pits are: piles of charcoal, burned sticks, and crude tools of copper and stone. Hundreds of stone hammers were found in these pits. From these things we know something about the people's way of mining.

Most people think Father Allouez was the first white man on the peninsula when he landed in 1667. The first attempt to mine copper by white man was in 1771, when Alexander Henry tried to start a mine near the Ontonagon River.

About 1841, Douglas Houghton, the first geologist of Michigan, announced Keweenaw and Keweenaw's copper to the world. That same year a few prospectors were tempted to come and search for copper. They came overland through rough and rugged wilderness. The next year, 1842, a few more came, but the real copper rush began in 1843, after Congress made a treaty with the Chippewa Indians. Thousands of prospectors swarmed over the area.

The many races of people in Keweenaw are the Finnish, Cornish, Scots, and Italians, along with hundreds of Franch-Canadians, The Finns and Cornish were the most numerous, and most important. The Cornish came to mine as they did in their native country as many others. The communities of Caluwhile the Finns came to till the soil and make this the center of culture in America.

Early Mining Towns

Three early boom towns, Copper Harbor, Eagle Harbor, and Ontonagon, started in 1843. The government stationed a mineral agent at Copper Harbor in 1843, and during that summer more than 100 permits were issued.

them the year 1800 mg

The first real copper mine in Keweenaw was found in 1844 at Copper Harbor, back of Fort Wilkins. But the mire wasn't very big--it was down only 15 feet when it closed. Fort Wilkins was built that year to protect the miners from the Indians, but it was said that when the miners had

been drinking, they were more dangerous than the Indians. The fort was named after William Wilkins, Secretary of War. On August 30, 1870, Fort Wilkins was discontinued as an army post.

Copper Mines

The Keweenaw Peninsula was the first copper boom in the United States. Copper mining as an industry began in 1845 when the Cliff Mine was opened. The Cliff was the first successful copper mine in Keweenaw. Two-thirds of the 26,880 lbs. of copper mined that year was of huge solid masses. Other early successful mines were the Quincy, Pewabic, and Franklin Mines.

The Ouincy Mine was started in 1848 at Hancock and it closed after World War II. The Ouincy and the Franklin were once the deepest copper mines in the world. The Calumet and Hecla and the Quincy Mines were the largest producers and the most profitable.

There are two important mining areas in Keweenaw. The first is around the old Keweeno Portage (Portage Canal). mines around this are are the Quincy, Atlantic, Superior, Baltic, Champion, Huron, and Isle Royale. These mines are centered around the twin cities of Houghton and Hancock. The other area is north of the Portage. The mines in this area are the Calumet, Allouez, Ahmeek, Seneca Ojibway, Cliff, Phoenix, Central, as well met, Laurium, Eagle Harbor, Eagle River, and Copper Harbor grew up in this area.

It was estimated that about 1000 mines started, but only about 100 produced some copper, and only 30 paid a profit. Mich gan's Keweenaw Peninsula produced more copper than any other state in the Union for 40 years between 1847 and 1887. By 1900, copper mines in Keweenaw were running into trouble because the western states were producing and selling copper cheaper. Today, Arizona, Utah, and Montana produce more copper than the Keweenaw Peninsula.

Early copper mining was harder and more costly than early prospectors thought it would be. The work was done by hand and

KEWEENAW PENINSULA (Cont.)

men always faced dangers that often took their lives. This is the way it was done. One man held and turned the drill while 2 other men with sledge hammers pounded the drill as it went down, sideways, or even up into rock overhead. The holes were then filled with black blasting powder and then the powder was exploded. The fallen rock was then shoveled or lifted by hand in cars and then pushed to the shaft. A crude lifting device, called a "horse whim" which was a large round drum on which a cable was wound, with one or more horses walking round and round turning the drum, the cable wound up bringing the cars of rock to the top of the mine.

Freeing the copper from the rock was hard work and done by hand. Strong men pounded the rock with heavy sledges to break the copper free. But about 1/4 of the copper was thrown out with the discarded rock. Later, expensive crushing mills were made to free the copper, but even these huge mills still left as high as 1/5 of the copper to be discarded. In fact, the Calumet and Hecla and the Quincy Mines have recovered about 5,000,000 lbs. of copper from the waste tailings (Discarded rock) of the old mills.

Many early mines which were busy 100 years ago, today are abandoned. Only site markers tell where some of these mines and even towns used to be. Many copper towns started, the mines closed, and the towns became ghost towns. Some ghost towns are Phoenix, Central, Seneca, Cliff, and Delaware. The busy days of copper have passed. Today Keweenaw is a beautiful vacation land.

The tourist business is Keweenaw is very good because it is an excellent all-season playground. Some well-known tourist attractions in Keweenaw County are the Brockway Mountain Drive, Fort Wilkins, and Lake Fanny Hoe.

In 1921, Houghton and Keweenaw Counties purchased Fort Wilkins for the purpose of restoring and preserving it. It was later taken over by the State of Michigan. Fort Wilkins now is a historical museum with valuable historical and mining items. The Arcadian Copper Mine &t Ripley was the

first to open for the public to come in and see how copper mining is done. Another tourist attraction is the Covered Road Drive. On this scenic drive, you will go through a tunnel formed by tree branches hanging over the road. The road was once a railroad which carried copper from the Atlantic Mine near Houghton to the mill at Redridge. The Atlantic Mine closed and the railroad was no longer needed, so it became a farm road. Other beautiful drives not mentioned are the Sand Dunes Drive, the Lake Shore Drive.

At the Michigan College of Mining and Technology is a large mineral display open to the public. At the Suomi College in Hancock is the Copper County Art Exhibit which is well worth seeing. This exhibit is located in Nikander Hall on Summit Street.

Keweenaw is free from pollen dust which makes it very good for hay fever victims who come here during the summer months. Many of the tourists who come are rockhounds who come to collect the semiprecious stones such as agates, chlorastrolites, thomsonites, etc.

Stream and lake fishing attract the tourist in almost all parts of the peninsula. Deep sea fishing in Lake Superior is very good. From Houghton, you can take a cruise to the beautiful Isle Royale National Park.

Jacobsville at the entrance to the Portage Canal, was once the center of the sandstone mining industry in Michigan. This sandstone is noted for its red color and its great hardness, It was quarried from the year 1880 to 1914.

Fish, mostly trout, was a very good export in the early days, but the lamprey have killed so many lake trout and other fish, that fishing isn't very good anymore. However, a small amount of fish is still exported.

Sports which the same of the same of the same

In the early days, sports of the Keweenaw Peninsula were wrestling and hockey, and the hand-drill contest was a favorite holiday sport. In a hand-drill contest,

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a team had to pound and drive a drill 9 and 3/4 inches as fast as they could into a solid rock. Ice hockey was liked the best. Today, sports are still enjoyed during all 4 seasons. Some of the favorite sports are winter - skiing, skating, and sleding; summer - swimming, golf, fishing, hunting, and horseback riding.

Cities

L'Anse - The word L'Anse is a French word meaning "the arch or the bay". The French came to the area in 1660. L'Anse was the first approach to civilization, when it was a trading post called Dubes Place in 1843. A large ore dock was built in 1872 by a railroad company. An attempt was made to haul iron ore from Negaunee and Ishpeming to the ore docks near L'Anse by railroad.

The first school house was built in 1858, and a new and better school was built in 1928. The first Lutheran Church work was done by the Norwegians, and the first Lutheran Church was organized in December, 1924, under the leadership of Rev. Qunabeck.

The early industries were fishing, trading, culture was important. The whole city farming, and brewing. Lumbering was very important. The Stearns and Culver Lumber Company started lumbering around L'Anse in January, 1923. The important trees were maple, hemlock, basswood, birch, elm, esh, and spruce. The first sawmill was built by Charles Childs in 1838. It ran for 12 years and then was destroyed by fire in 1850. Another mill was built in 1893 and destroyed again by fire in 1896 when the town burned half down.

Fishing has been carried on ever since the first white man came. It was a very profitable industry, but the lamprey have killed many fish. The most important fish were trout, whitefish, herring, suckers, and some bass and pike.

Baraga - The Chippewa Indians lived in the area of Baraga long before the first white man arrived. The first white man who landed here was Pere Mesnard, a French-world. man. Baraga is named after Father Baraga

The leading industry in Baraga was lumber. ing. The lumber industry increased the population of Scandinavians, French, Germans, and English.

A famous man who lived in Baraga was Francis Jacker. Jacker was a very good artist and he made several masterpieces of craftsmanship which include 2 fine globes, On February 12, 1923, Francis Jacker died at the age of 83.

Houghton and Hancock - In 1844, Douglas Houghton made a survey of the Houghton-Hancock area. That same year, Houghton drowned at Eagle Harbor with his faithful dog, but the papers of his survey were found in his pockets. A statue was made of the two where they died.

Houghton and Hancock began in the 1850's when Ransom Shelden and Christopher Douglass dotted out what became these twin cities. Both towns grew larger as more mines opened in the area. The cities get their water from an underground stream in a mine at Painesdale about 10 miles away.

The industries in the City of Hancock were smelting works, iron works, and lumbering. In addition to mining, agriwas almost burned by fire in 1869. Right after this, a fire department was started.

Today Hancock is a modern mining and industrial city. It is modern and very well kept. It is the gateway to the beautifu' Keweenaw County. Hancock is the perfect country for outdoor camping and wildlife. It is truly a beautiful country.

In Houghton, the Michigan Mining School was started in 1885, mainly by the effort. of State Senator Jay A. Hubbell. The School is now called the Michigan College of Mining and Technology. In September, 1886, the first classes were held in the Houghton Fire Hall for 23 students. Hubbell Hall, the oldest building on the campus, was opened in 1889. That year, 1889, the first class of 6 students graduated. Scientific and engineering majors come to this college from all over the In one a modele would be placed

who started a Christian Church here in 1843 The Suomi College was started in 1896 at

KEWEENAW PENINSULA (Cont.)

Hancock by the Finnish people. It was the first Finnish Lutheran College in the United States. It is noted for its excellent choirs that perform all over the United States and Canada (and now in Europe).

Calumet - In 1858, copper was found in Calumet while building a road, but it was not mined until 1866. The Red Jacket Mine in Calumet was once the deepest copper mine in Keweenaw. It is 5,690 feet vertically, but now the Quincy in Hancock is 6,254 feet deep vertically and the deepest.

At Laurium, the city right next to Calumet, is the George Gipp Memorial Fountain. Gipp was a famous Notre Dame and All-American Halfback who grew up in Laurium and went to the Calumet High School.

Ontonagon - Ontonagon was a sawmill town, a paper mill town, and fishing village. Today it is a good agricultural region with mostly grains growing here such as wheat, oats, barley, corn, and rye. It is also an ideal dairy country. Ontonagon is famous for its strawberries which are grown along with many other berries.

Although the Keweenaw Peninsula was once a rugged wilderness and then a booming copper region, it still has its natural scenic beauty for tourists to enjoy.

Glenn Kivela

* * *

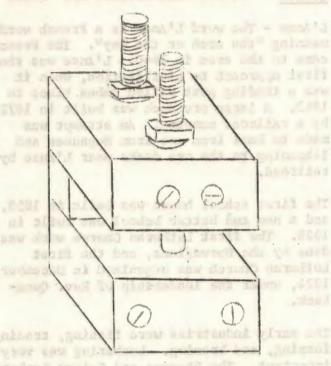
POLISHING HINT

Looking over Jarl Kivela's shoulder I saw a clamp for holding half nodules and slab ends which I feel should be publicized. I believe this device is Jarl's own design. It is built of 2 pieces of hardwood 1" x 2" x 5" held together with 2 bolts either 5/16 or 3/8 diameter, and 4 heavy wood screws. The wood screws are not screwed in all the way, but are left protruding about 1/8 ", which provides a lip to hold the rock edge.

In use a nodule would be placed between

the State of the year staying to 1890 of

one end of the wood blocks and a wooden block of equal thickness placed between the opposite ends and the bolts tightened The clamp is then placed in the saw vise and half of the nodule is sliced. Then the half nodule is placed under the screw heads with a wooden block between the opposite ends and the sawing is completed The wood blocks which are used as a fille in the end opposite the rock should be of such a size that the blocks are parallel. See illustration below.



Albert Murray

TOURMALINE

With the widest range of tints among semi-precious stones, tourmaline lends delicate charm to pendants, beads, and brooches. When viewed from different directions, this mineral reveals varying colors. John Ruskin, English author and art critic, wrote, "The chemistry of it is more like a mediaeval doctor's prescription than the making of a respectable mineral. This newcomer among gems has been known only since the early 18th century. In the U.S., tourmaline was first found in 1820 in Maine, The mineral is now found widely in Madagascar, Brazil, Elba, Ceylon, Burma, and the U.S. Jewelers say it gets dustier than other gems in window displays.

KEWEENAW COLLECTING

The beaches have been combed; the ridges have been blasted; the poor rock piles have been climbed over, dug into, and searched for the last visible pieces of copper and datolite. Fall leaves and deep snows will soon cover this past summer's trails left by the prospectors who we know With the diminishing supply of agates and as the rockhound.

The rock collector will be home sorting, tumbling, cutting and polishing his past summer's find. He will find stones to be ties -- if you are a camper -- or Copper added to the gravel in the driveway; son John will be throwing some at targets, both moving and stationary; his wife will the area. be adding some to the colorful array in the fish bowl or sneaking some into the trash before all her china is replaced in the china cabinet. Among the keepers only for show or jewelry. They will be shown with pride and much talk of beaches walked, of people met and new friends terests kindled along the ridges, rock piles, and beaches of Michigan's Keweenaw Peninsula.

These stones and minerals found and colcarried away in a pocket or rock sack, they will never be returned. The winter ridges will continue to work at exposing new agate outcroppings -- infinitely slow though it may be. The rock pile hunter can always dig deeper for datolite or develop an interest in some of the beautiful rocks now being discarded. It will be a long time before the supply has diminished to the point of no returns for hours spent.

Within the last few years, a new and rugged breed of rock hunter has been dev veloping. The skin diver has found the Prehnite, with its inclusions of copper. exciting and enjoyable hobby of collecting will be one of the sought after minerals Superior are much to his liking. Visibili-its great beauty. Pale green to light gravel bars without fear of human inter- discarded by most collectors. They need ference or sharks. A one-inch agate view- only to cut and polish a few specimens to takes on the dimensions of a collector's it be that it is too common? Best found

You reach for a baseball-sized beauty only to narrow your grasp to pea-pickin' size. Think, though, of the thrill when you do find the baseball size -- and they are finding them. To say the least -- it is doubtful if the waters will every be

datolite, we might spend a few minutes thinking and exploring for the available materials of the Keweenaw Area. With Fort Wilkens State Park as a center of activi-Harbor is you find the comforts of a motel or cabin to your liking, we will prospect

With most of the land in the area in private ownership, you may find it necessary to seek permission for your exploring. To though will be many fine specimens fit date, there is very little land off limits. This might change -- if it does, it is only right and fair for you to seek permission.

found. Clubs will grow as a result of in- The beaches are the most readily available and most people find on them the greatest satisfaction for beauty of water and variety of stone. Various types of quartz crystals are to be found -- amethyst, chalcedony, carnelian, agate, jasper, onyx, lected are a non-renewable resource. Once chert, and flint. The cherts and flints are going to be the most common and they will be found in a variety of colors and waves and ice of Lake Superior will roll are fine for tumbling or cutting and poliup a new batch. The frost action on the shing. Jasper, from reds to yellows, are excellent for a variety of uses.

> Thompsonite with its white, pink, green, and yellow mottlings and eyed appearance can be placed in the gem mineral class. Thomsonite appears in the old lava flows and may be broken out of the matrix or is often found tumbled and water polished along the Superior beaches. They are often overlooked because of lack of knowledge for identification.

specimens. The cold clear waters of Lake as soon as collectors begin to appreciate ty is good and he can search the untrodden pink, hard and polishable, it is now being ed through ten feet of Lake Superior water begin to realize its great beauty. Could specimen for the Smithsonian Institute. in the old rock piles, although beach and

KEWEENAW COLLECTING (Cont.)

water-worn specimens are not rare.

Breccia, cemented, broken, angular, and unweathered fragments of rock, are generally considered throwing rocks. Have you cut and polished them? You might try and have a surprise! Often found cemented with epidote, the green mottled breccias make fine cutting material.

Rocks found on the beach appear to be more beautiful than those of the rock piles because they have been water tumbled and are often wet. Don't be misled -- rocks and minerals worth collecting are found in both places.

Often overlooked are the pink crystal forms of datolite found at the Copper Falls Mine piles. The nodule form of datolite is the type most often sought because of its polishing abilities. For the collector, he or she should have some of the crystal form. There is a great amount at the Copper Falls Mine.

You can't carry off more than the old car will carry. Some have tried with poor results. You don't however, want to overlook your winter's supply of tumbling material, so just pick up a sack or two or "pretty" stones. You can add to the driveway or furnish John with throwing stuff or drive your wife rock happy and polish the rest. The same and a saling

Whatever you do, have fun.

Glenn Gregg

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QUARTZ

Soothsayers peer into crystal balls to foretell coming events. Perhaps these 'magical" qualities are influenced by eye fatigue or hypnotism. From a half-ton piece of Burmese quartz came a flawless 106 lb. crystal sphere presented to the U.S. National Museum in Washington, D.C., in memory of Worcester Reed Warner, by his widow. It was carved in China and polished in Japan. Quartz, when transparent and colorless as glass, is popularly called rock crystal. The name came from the Greek word, krystallos,

for "clear ice." It glistens in crystal vases, goblets, and figurines, or as beads and rondels (spacers between other beads). beam chindred over, dug through

When quartz is put under pressure, as by sound waves, it exerts an electrical charge. "Pulse" of every broadcasting station is a quartz wafer, no bigger than a postage stamp. Ground to a precise thickness, the wafer permits waves of only one frequency to pass and assures the station uniform transmission. Quartz crystals can carry many long-distance telephone conversations on the same wire without mixing them. Crystals serve also in radar, sonar, astronomical clocks, and telegraphy. the rish towl or shanding some land

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COPPER BOULDER

the vest entry, they will A three-ton lump of native metal, once worshipped by Indians, was discovered in Michigan's Lake Superior region in 1766. Several expeditions tried in vain to move it. In 1843 Julius Eldred, a Detroit merchant, carried it off by portable railway and raft, only to have his prize seized by the Secretary of War. The National Museum, custodian of the boulder, values its copper content at about \$1,500. Chisel marks are to be found on the boulder; they were probably made by some early explorer.

elected in the same + + + down and age it may buy the rack plie hunter

A STRING OF BEADS

Prehistory's Pueblo Indians, like today's Navajos, prized turquoise above all other stones. A priceless string of 2,500 turquoise beads, hand polished and flint drilled, was discovered in 1924 by a National Geographic Society expedition led by Neil M. Judd. They were found in Pueblo Bonito, New Mexico. They are now on display at the Society's headquarters.

Author we was to a sold age.

Or old decem mee of deat book at 72 Why can't a man living in Winston-Salem, North Carolina, be buried west of the Mississippi River? served in a the ministrate of the server stated

THE TWENTY-THIRD ANNUAL MIDWEST FEDERATION COUNCIL MEETING July 17,1963 as reported by C.R.MARKERT, delegate

The twenty-third annual business meeting of the Midwest Federation of Mineralogical & Geological Societies was called to order at 9:45 A.M. by President Bernice Rexin, who welcomed the delegates from 42 of the affiliated Midwest Societies, as well as the meny guests and Executive members present.

After an invocation by Past President, Floyd Mortenson, the basiness got under way by dispensing with the reading of the previous, Des Moines, Iowa council minutes. The sound financial standing of the Midwest was reflected in the report of Treasurer, Wm deNeui. A balance of \$2,338.68 was reported and his books were reported in perfect order by the Auditing committee. Details of this report and others may be obtained by contacting this writer.

The Midwest was a beehive of activity as was evident by the many interesting reports of the State Vice Presidents. Marion Gigery V.P. of Michigan has appointed four assistants in the State. They are Floyd Mortenson, Hugh J.meson, Russell Greer, and Bob Markert.

The following committees reported on their activities, Archeology, Geology, Lapidary, Mineralogy, Paleontology, Education, Program, Rockrama, Directory, and membership. Dtails of these reports are also availbele for those interested. Of special interest to the club would be the slide programs which are available through Mr. Ellis Courters Program Committee.

One club The Grand Valley Rock & Mineral Soc. of Ionia, Mich was accepted into membership of the Midwest Federation.

Committee Chairmen reported on Mineral & Fossil Exchange, Nomenclature, Letter A Monthe, Field Trip Callendar of Events, Bulletin Exchange, Uniform rules, collecting areas, Display Cases, legislation, and Rock Hunters Guide. As related to assembling information for the last committee mentioned, the Ishpeming Rock & Mineral Club has furnish ed Mr Russell MacFall with a 1960 Souvenir Bulletin in which our collect ing iformation can be found.

The 1964 Midwest Federation Convention will be held in Muskegon, Mich on July 23, 24, 25, and 26. An urgent appeal was made for cooperation by all MW clubs in providing displays for this show. WHAT ARE WE GOING TO DO ABOUT THIS APPEAL?

Mrd June Culp Zeitner, author of "GEM TRAILS" and Joseph : ... ?
Phettaplace of Wauzeka, Wis. Nationally known Mosaic artist were present ed with Honorary Memberships in the Midwest Federation.

The following persons were elected as our Officers for the new year

Pres. Russ Kemp, 16410 University Ave., South Holland, Ill.
V.Pres. Merton Young, Michigantown, Ind.
Sec. Mrs Katherine Steinbrenner, 2813 Fatricia Dr., Des Moines
Tres. W.H. de Neui, 6600 Cornelia Drive, Mpls 24, Minn.
Historian Dr. Ben Hur Wilson, 406 Grover St., Joliet, Ill.

The good wishes of the Ishpeming Rock & Miner 1 Club is being extended to these Officers and may the MIDWEST prosper under their guidance.

Early in the year the subject of vacations came up, and our decision was to go to California. The boys busied themselves with maps and brochures on the national parks and monuments. They compiled a list of places that extended from home to Arizona, California, Oregon, and back, including all the places in This list was staggering and between. left out nothing, but of course it did not mean that we would visit all these places -- rather it would be a guide from which to choose. Among the maps and lists were mineral locations and rock In preparation for the trip we shops. assembled our camp gear, tent, cots, sleeping bags, stove, pots and pans, dishes, clothing, etc. As you might well imagine, the total made a staggering pile. When vacation time came, we loaded the Rambler and a two-wheel trailer and started on our way.

We left Escanaba on July 16 (temperature 70° and speedometer 4313.4). Our Rambler had recently passed 100,000 miles and had the engine rebuilt. We traveled through Wisconsin and Illinois, crossed the Miss sissippi at Davenport, Iowa, and continued westerly to Omaha Nebraska. We passed endless miles of corn in gently rolling country in Iowa, but in Nebraska the crop became alfalfa. Every few miles we would pass alfafa-drying plants where the alfalfa was dried in huge rotary kilns which are fired with gas and give off a peculiar odor.

Our route across Nebraska which paralleled the North Platte was the route followed by many of the wagon trains going West, and it is said there are still ruts from these trains in some areas that can be seen when flying along this route. We camped at the Sutherland State Special Use Area just south of Sutherland, Neb. There are two camp areas here, and we passed the first camp area without seeing it. At the second area there wasn't a single outfit, so we continued along a dirt road. Without realizing it, we had gotten inside the levee and traveled quite a distance before we knew something was wrong. The trail on which we were traveling was sand with a slight amount of gravel. When we started to turn

around, we had to unhitch the trailer and see-saw back and forth to turn. The sand was very loose and soft, and I did not dare to get the back wheels off of the roadway. With help from my wife and the boys we turned around, rehitched the trailer, and found our campground at 8:32 P.M. Mountain Time. Mileage 5543.7)

Saturday took us through Ogallala, Neb., The Home of good Sandhill Cattle, into Colorado on U.S. 138 near Julesburg, through Sterling, Colorado (temp. 94°), and then along Interstate 80S where we got our first view of the Rocky Mountains near Roggen, Colorado. The line of peaks was dimly apparent through the cloud banks (Mileage 5750). We were traveling at an angle toward the mountains and had not reached them yet at Denver.

We spent the night at the Stanley Motel after driving into the mountains along a twisting switchback road, through three tunnels, to an elevation obove 9000 feet, where we had planned to camp. It was bitterly cold so we returned to Denver. The road is built in a gorge along a river and there are precipitous cliffs along one side and sheer drop-offs on the other side, with practically no shoulders and very few guard rails. Needless to say, it was somewhat of a relief to get out of these mountains and onto better roads.

We spent Sunday in and around Denver. visited the Missouri Minerals Rock Shop, but the proprietor was not interested in trading for the minerals which we had along with us. One of the outstanding attractions in this area is Pikes Peak. This mountain is 14,110 feet high. it is not height alone which counts in this case, but the fact that Pikes Peak is on the eastern edge of the Rockies and it stands out very prominently. There are cable cars taking passengers up and down as well as buses. There is a road to the top which any ordinary car can negotiate. The view from the top covers a tremendous area in clear weather.

We camped at the Pla Mor Mobile Village at Colorado Springs. Monday we visited the Garden of the Gods. Here are found through a large part of the cavern have formations which they call popcorn. This was formed in the distant past when the cavern was partly inundated. Before this inundation occurred, there was a great rock fall from the roof in one of the large rooms, and huge blocks of rock lie in jumbled heaps and are covered with popcorn. This cavern is tremendous and very impressive, though it does lack the color which we have seen in other caves. About an hour before sunset, we assembled outside to watch the bat flights. When the flights start, they emerge in groups circling around higher and higher and finally away. These flights continue for more than an hour during which time hundreds of thousands of bats are on their way to return at dawn.

With the bat flights well established, we headed back to the car and started on our way once more. Mileage, 6669.9. Up to this point we had traveled 1356.5 miles and were 10 days out of Escanaba. We con- miles. The park road crosses Highway 66 tinued on to Riverside, New Mexico, where we stayed at the Riverside Rancho which is past the Puerco Indian Ruin, an ancient west of Roswell. New Mexico.

Friday we left Riverside and were on our way toward San Antonio, New Mexico. The highway crosses over the Malpais Lava Flows. We stopped at a roadside table and had lunch. The roadside tables in this area are constructed of concrete and have table tops about 4 inches thick. They should last a long time. The table at which we stopped also had a canopy of corrugated iron to provide shade. While here, we went out a short way on the lava. The surface is rippled like waves and is criss-crossed with crevices, hole, and caves. We picked up several pieces of lava for our collection and also several pieces of cactus wood. This cactus is quite interesting. The stems are hollow and full of oblong holes like tubular pieces of lace. It is used to make decorative objects such as lamps. The temperature here was well over 100° so we didn't stay very long. There is a great difference between hot weather in New Mexico and in Michigan. It is so dry that you do not skin as fast as it forms.

at Malpais Court, Grants, New Mexico. The area around Grants is a uranium-mining center. There are a considerable number of mines here. We visited the Phillips Sandstone Mine, now owned by United Nuclear, and the United Nuclear Mill. We got ore samples at both places. From here we went on to the Petrified Forest National Park. We entered the park through the Painted Desert Visitor Center. The colors of the hills here are outstandingly beautiful. There are many varied pastel color. as we drove along. This area is a typical bad lands. The hills are eroded and gullied with some mesa areas where the sandstone cap rock gives protection.

The badlands are mostly water-deposited layers of volcanic ash with interbedded layers of sandstone shale and gravels. The alteration product of the volcanic ash is bentonite, essentially a nearly-white material, but small quantities of iron oxide have stained it into numberous shades of red, brown, yellow, and blue. This area can be seen for quite a number of on an overpass and continues southerly village of about 150 rooms which was in use up to about 600 years ago. Nearby is newspaper rock--petroglyphs carved in a giant sandstone block. Their meaning has not been interpreted.

Continuing on, we came to tremendous quantities of petrified wood, mostly in short log sections. These sections are eroded out of the soft clay-like ground until they are perched on a little pinnacle of ground like a toad stool when they finally topple over, rolling down the hillside to accumulate in great masses. Near the center of the park is a log called the Agate Bridge. The ground has been eroded from under the center for about 40 feet. It has been shored up with a congrete beam to prevent collapse. A short side road extends into an area called Jasper Forest where both whole and part logs can be seen by the thousands. Further south an area called Crystal Forest is seen right next to the road. The trees in this area had both clear and amethyst quartz crystals Before the area was made into a park, many perspire. The moisture evaporates from the logs were blasted by gem hunters. Next we came to the long logs where many tree-We continued on our way to spend the night length logs lie criss-crossed over a large

grotesquely beautiful sandstone formations. even these became more stunted as we went They are tilted and tumbled in all direc- until there were none. In the meantime, tions and wind-worn into many shapes. Many of these formations have been given exotic names, but mere words of description cannot do their beauty justice. Garden of the Gods is contained in only a few square miles which is well traversed with roads, with an endless parade of sightseers. The shapes and color here are truly magnificent.

We visited Baders Gems and Minerals at 3910 N. Nevada (U.S. 85 and 87) at Colorado Springs where we traded for many nice specimens. After leaving Baders we continued on to Penrose, Colorado and to Canon City where we spent the night at Mac's Trailer Park.

In the morning we had a flat tire on the trailer, so we dropped it off and continued on to the Royal Gorge. Some thirty years ago, an engineer built a suspension bridge across the Gorge. The bridge is quite lightly built and it weaves and undulates as the cars drive across. This bridge was strengthened some years back by twisting more wires onto the main cables making them about 7 inches in diameter. Other cables have been placed below the bridge and out to the sides to reduce the sway. In the bottom of the Gorge there is a railroad on one side and a huge penstock made of wood on the other side. The Gorge is about 1000 feet deep and the bridge is 1260 feet long.

In addition to the bridge there is an inclined railway or hoist with 2 cars operating on a single track in the center of which are two automatic switches and a short span of double track where the cars pass each other. We left the Gorge and started out for Carlsbad Caverns. Mileage 6077. From here on our route was mostly south. We crossed from Colorado to New Mexico via the Raton Pass where we stayed at the Davis Court.

Wednesday, July 24 -- south bound. The only trees to be seen were those that had been planted around some of the homes. We were now passing through real desert country. Outside of these trees, there were only

there was more and more cactus and everything was dry and brown as far as the eye could see. Scattered over the countryside was a large number of windmills on towers, and if they were able to get water there would be a few cows (though I couldn't see what those cows ate because the vegetation was very sparse and then mostly cactus). We stopped for the night at the LaSalle Court at Roswell, New Mexico. Mileage 6558; temperature 1100+.

While we were passing through this desert area, we made many stops to make lemonade or iced tea. At first we made it in quart containers, but we wound up making it by the pailfull. Many of the gas stations gave free ice cubes when you filled up which we saved for our iced drinks, but we bought block ice for our cooler. The block ice lasts about twice as long as cubes. We had a number of water containers which the boys refilled at every opportunity. They always sampled the water first before dumping any out because in someplaces the water has an unpleasant taste. The supermarkets sell distilled water in 5 gallon jugs which many people buy for drinking purposes.

We left Roswell and went on to Carlsbad, New Mexico, on Thursday, and here we ate at a water sports and picnic area. This was the first water we had come upon in many hundreds of miles, and in another 30 miles we arrived at Carlsbad Cavers National Park Visitors Center. From the lobby you go by elevator down into the cavern, or you can enter through a natural entrance on foot, but all visitors leave by elevator. It is 750 feet down from the lobby to the cavern at which point there is a huge dining hall and many service counters for souvenirs and post cards together with postal service where your mail is postmarked 750 feet underground. The rangers take the visitors through the cavern in groups or tours. At one point they have benches where everyone is seated while the history of the cavern is related. There are thousands of stalactites and stalagmites and quite a number of columna. As usual, the more prominent stunted Pinon, more brush than tree, and formations have all been named. The walls area. Nearby was an ancient ruin called Agate House made up entirely of petrified wood which appeared to have seven rooms, some quite small. After looking over the long logs and the agate house, we started walking back to the car.

to be continued.

Albert E. Murray

* * *

Help Eliminate Litter Please--Howdy Neighbors...

Relax, my friends, enjoy yourselves,
Leave all your cares behind.
Forget the city's din and factory smoke,
Regain your peace of mind.
The woods, the trees, the air, the peaks,
Harmonize in a grant design.

My home is yours, your're welcome, friend,
Come share my every treasure;
It's available to all who come,
It's for everybody's pleasure.
Now, in return, my needs are small-And you can spare full measure.

I ask you be careful, so
Our forests will stay green,
And those who follow after you
May enjoy an equal scene.

I ask that trail and camping spot
Be uncluttered, whole, and clean.

I hope you pass this way again
Through this place that I hold dear;
To this lovely sport of wilderness
That's My Home throughout the year.
If we're all "Howdy" neighbors,
(And I'm mighty sure we are)
We'll enjoy succeeding visits here
Even more, by far.

Wm. R. MacDonald, The Fox Rox News

* * *

sould sould you light light

An archaeologist claimed he found some gold coins dated 46 B.C. Do you think he did?

Wustite and akaganeite sound like the names of two creatures from outer space, and, to a certain extent, they are. Last week, a mineralogist at the Smithsonian Astrophysical Observatory in Cambridge, Mass., reported that these two rare minerals have been brought to earth from space via the Soviet Union's Sputnik IV Satallite.

Launched on May 15, 1960, Sputnik IV broke up and fell back to earth over the norther United States last September, and a 20pound chunk plowed into a street in Manitowoc, Wisconsin. It was forwarded to the Smithsonian where a blond mineralogist named Ursula Marvin subjected the fragment's black cindery crust to the standard X-ray film. "Each mineral has a distinctive pattern of black lines on the X-ray film," she explains, "like fingerprints." But they patterns Mrs. Marvin found didn't match those of the usual iron minerals which could be expected to form when a steel fragment tears through the oxygen-rich atmosphere. Puzzled, she checked the card file of the American Society for Testing Materials. One of the patterns fit that of wustite, a black xl composed of iron and oxygen atoms; the other, she decided after consultation with other mineralogists, was akaganeite, a red mineral made when iron, oxygen, and hydrogen combine.

Mrs. Marvin next reasoned that a steel satellite re-entering the atmosphere is not too different from a natural iron meteorite. So, she subjected several meteorites--including one which fell in 1847-- to the same analysis. To her delight, the too, contained wustite and akaganeite-minerals which occur on earth, chiefly in steel-smelting, but which decay immediately into more common iron minerals. Why, then, have these minerals lasted so long when made in space?

"When the sputnik re-entered the atmosphere Mrs. Marvin explained, "it became very hot above 1,535° C, the melting point of iron. The iron combined with oxygen and formed wustite. Then the sputnik must have cooled very rapidly, or we wouldn't have found it preserved." Whether the stable form of wustite and akaganeite will prove useful

STRANGE INTRUDERS (Cont.)

to future technology is anybody's guess. But it does seem likely that their names will now move off the list of curiosities and into standard reference books.

Newsweek, January 14, 1963 contributed by Domenica Carlyon

How much dirt is in a hole 3 feet deep and 2 feet in diameter?

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HELLO THERE!

Winter greetings, you all! Summer's gone and so's Fall. Ole Man Winter's staring us in the face. Sure missed out on field trips and numerous club meetings, etc., but, being a true rockhound, one has compensations regardless how one spends one's time. Being a "Jack-of-all-Trades and Master-of-None" I even ended up picking spuds on endless rows this fall, and was so amazed to catch myself eyeing the rocks first, which the digger had sifted, and then until the spuds. How pretty these rocks looked when they rolled out of the fresh earth! -- bright red, pink, and green in quartz. I stuffed them into the pockets of my jeans, on the next round unloaded them into my jeep, and picked some more. Hah! Even came across a very beautiful agate. Can you beat that? Instead of being monotonous, I found out potatoe picking can be exciting after one becomes a rockhound.

However, we dropped everything on the 19th of October, and Carol and I drove to Stambaugh to visit the Dooleys. Bernie took us to the mine dumps there on a field And so we bid goodbye to Colleen, Erin, trip. As we arrived at the first place, 2 and Bernie, and headed back home. We nice kids joined us. They seemed to be acquainted with Bernie as they kept asking his opinion on different specimens they found. After I found out what we were to look for, I really went to town. Although the head of my hammer was loose and kept slipping off when I was pounding at the rocks (good thing no one was around as I talk to meself out loud) I sure found lovely specimens. At least I thought so! Maybe it doesn't take much to please me.

But, there I was a true chain gang member, breaking rocks like crazy. In the meantime, the others had drifted out of sight and Bernie had remarked to Carl, "Where did your mother get left?" "Huh!" Carol had said, "she'll be coming through the pile give her time--not around it." And so it would have been hadn't we moved on to another pile. Its a good thing I don't live in Stambaugh as they wound't have much stock pile left with me around, at least judging from the way I felt when we were there.

The day was just perfect -- a beautiful Indian Summer day! And I was doing something that was right up my alley. We picked hematites, magnetites, selenite, crystals -- even the pyrite was in beautiful crystals. Finally our young friends bid us goodbye, and we left also.

Then, to top off a perfect day, we ended it up by celebrating our Thanksgiving Day a month earlier than even F.D.R. did.

My hote in yours, your'ms colored, intour Bernie's always bragged about Colleen's cooking -- well, I must agree wholeheartedly. She is a Gem of a Cook ... a real Jewel of a One! Can you imagine walking in hungry from a field trip to a table set with the nicest, biggest turkey plus all the dressings and yummies to go with it. Ummmmmmm. how we stuffed ourselves.

But that didn't end the day yet. Down in the basement was Bernie's priceless collection of gems and minerals. He was rearranging and indexing his collection so most of them were set in boxes. We helped him for awhile there. How he trusted me to handle those priceless, fragile specimens is beyond me. At least I was extra careful -- he can be thankful for that.

sure had a swell day.

Taine Kokko

If you had only one match and entered a room in which there was a kerosene lamp, an oilburner, and a wood-burning stove, which would you light first?

September, 1963

Dear Members:

I am indeed sorry that we were unable to attend the 1963 Midwest Federation Field Trip Convention in July at the Hibbing area. We have heard many wonderful reports of this meeting and have had the pleasure of listening to all the tapes recorded at the meetings. I wish it would have been possible for me to thank each of you for the honor bestowed upon me in electing me President of the Federation. A very fine slate of officers was elected at that time. At the meeting it was pointed out that many clubs and their members do not know who their elected MWF officers are. The following officers will serve your Federation until the Muskegon Show and Convention next July:

President - Russ Kemp, 16410 University Avenue, South Holland, Illinois. Vice President - Merton Young, Michigantown, Indiana.

Secretary - Mrs. Katharine Steinbrenner, 2813 Patricia Drive, Des Moines, Iowa. Treasurer - W. H. deNeui, 6600 Cornelia Drive, Minneapolis 24, Minnesota. Historian - Dr. Ben Hur Wilson, 406 Grover Street, Joliet, Illinois.

These officers and the appointed State Vice-Presidents, Division Chairman, and Committee Chairman will serve the Federation to the best of their abilities. If you as an individual, or club group have any ideas that you would like presented to the Federation, let us know your thoughts, and we will pass them on at the proper time.

During the past few years, it has been the policy of each President, to suggest a theme and for the Federation to work with that theme. We have information that Mr. Al Keen, President-Elect of the American Federation, will promote a "Know Your Neighbor" campaign, in his coming term of office.

With your kind permission, we would like to help in this campaign and use a theme that follows along this line. In addition to "Knowing Your Neighbor", we feel that you should Enjoy Your Neighbor. Get to know the new members in your Societies, visit the new groups that have joined the MWF, make them feel welcome and help them to enjoy our great hobby. Let us as individuals and clubs visit and participate in as many meetings and shows as possible. Lets all ENJOY our friends and our hobby to the fullest.

We can now look back on a year of accomplishments under the very able direction of our immediately past-President Mrs. Bernice Rexin. You will be happy to learn that Bernice has been elected to Regional Vice President of the American Federation. We know that she will continue her efforts on our behalf. During this past year, Bernice and her officers and Committee Chairman have done a wonderful job for us...our thanks to all of them.

In the coming year, Doris and I will visit as many shows and club meetings as we can arrange and look forward to seeing all of you in the near future.

Russ Kemp

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BEACHCOMBERS

In the days of the earliest dinosaurs, volcanoes spewed across the face of what is now Nova Scotia. Gases formed bubbles in the slowly hardening lava. As eons passed, mineral-laden waters seeped into these cavities, depositing agate and amethyst, colored varities of quartz.

The stormy waters of winter now wash these semi-precious stones from Fundy's cliffs, strewing them on the beaches. Each spring, collectors rush to take first pick.

Micmac Indians believed that their legendary hero, Glooscap, cleaved distant Cape Split in a fight with his enemy, the Beaver, and broke the rocks.

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Mistakes are lessons of wisdom.



by Roy Hansen

Since the last Jaspilite, Scott and Dudley Markert, along with Ken Dobson and James Urquhart, have been busy investigating the old rock piles and agate beaches from Whitefish Point to the tip of the Copper Country. On one such safari from the fabulous Clark Mine, fine specimens were picked and packed out for the local rockhound to drool over. Among these was a specimen of datolite in a prehnite matrix, and to top it off, there was a half-breed inclusion. So, keep looking everybody! It's there.

of the sail old * * * Lower secupator

Bob and Marian Markert represented the club as dealers at the Wauwatosa Rock-rama. Carol Kokko accompanied them. Ray and Edith Anderson were also there, and the Bernard Dooleys showed up too.

Much can be gained by attending the activities of other clubs, to say nothing of the fine specimens which are available.

* * *

The members of the Ishpeming Rock & Mineral Club, Inc., were pleasantly surprised at the last meeting to see Gladys Haney. She was just bubbling with enthusiasm as usual and kept busy renewing old acquaintances. She is settled in retirement in a wonderfully appointed home in Sparta,

Wisconsin. She has her new mineral display cabinet finished and could use some good copper and iron specimens. However, specimens or not, if you go near Sparta, drop in to see her.

account the 1963 Mindet Pederation Plots

Lena and Bud Bamford are getting to be well-acquainted with the Hibbing-Chisholm area. How about an article?

Steve Urich, their grandson, has moved up there. We hope that Steve will stop in to visit us when he has occasion to come back to Ishpeming to see his grandparents. We also hope he has a chance to rockhound and finds some of those beautiful specimens from that area.

The Aries allow arealis and I were your

We have heard by the grapevine that our friends from Deerton, the Jim Volkemas, have experienced a temporary slow-down in their combined collecting activities. It seems that Mrs. Jim got involved with a collecting area and came out second best with a ruptured disc. She was hospitalized at the last report. A speedy recovery to Mrs. Volkemas. We hope to see you soon.

Tiese pilicup and the appointed Street

Elmer Jarvi visited the Central Mine area and returned with some nice specimens. Among these were native copper, some vein thomsonite, a little prehnite, and, oh, some datolite...very good datolite at that. (This is according to Elmer, and he kept adding to the list as we were speaking to him. So now we are wondering, Elmer, what else you found there that you forgot about.)

there got for the lot wather to with with

The Harvest Festival drew large crowds again this year. One of our favorite displays was the Markerts booth with all the rocks and minerals and jewelry. Here also were demonstrations in silver craft put on by Bob Kruzan. He lives in Itasca, Illinois and does silversmithing for Widengers.

Those attending the October 27 meeting took part in a new type of program conducted as an earth science workshop. The object of this workshop was to encourage utilization of local resources and collecting trips. After a brief discussion of the Cliff Mine field trip on Saturday, November 2, the group adjourned temporarily to a nearby road cut. After collecting for 5 minutes, goethite and specular hematite specimens were found. At the end of an hour, exceptional xls and many other numerous iron minerals had been located.

The group then returned to the Ski Museum for a critique on the workshop. This was followed by lunch and individual discussion and counseling by the expert members. From the Editor: I again wish to thank More of these workshops are planned for the future. Take advantage of them.

* * *

Bob and Mary Lee Weekley will be leaving us on December 16. They will be moving to Sioux City according to present plans. We hope they will come back to us on their vacations. We are very sorry to be losing these valuable members. Our loss will be some other club's gain.

Jarl Kivela and Roy Hansen made a trip to the Copper Country to locate the access road to the area on top of the cliffs by the Mohawk and Phoenix where the old Cliff Mine is located. After many dry(?) runs ending up in a beaver pond, Lake Superior, and other dead ends, the road was finally discovered which led to the mine. On the way in, several old trenches and explorations were located. Some nice cutting prehnite and epidote, both with copper inclusions, were found in these dumps. At the Cliff Mine, much native copper and even a specimen of silver in matrix was found.

The Markerts have moved from Ishpeming. They purchased the Seven Pines Motel. It is now known as the Markert's Rock Shop and Motel. Their new address is Rte. 1, Box 620, Ishpeming. Take a drive 4 miles west of Ishpeming on U.S. 41 and visit them.

* * *

Jim and Mary Edwards have moved. They are supposed to have gone either to Lake Forest or Duluth. We are sorry to loose them as they were very active, cooperative members. Good luck to them.

* * *

This space is reserved for the little field trips and other occurences of interest that happened to you between the issues of the Jaspilite. Write them up and submit them to us, please. Any news concerning our friends and members is encouraged.

everyone who submitted stories and articles for this issue of the Jaspilite. You are the ones who can make our bulletin a successful publication. A successful publication is one which is of interest to those who receive it. So, continue to send in your written articles or clippings from books, newspapers, or magazines.

One of your Jaspilites in the near future will contain the new Constitution which you will be called upon to approve or disapprove. Read it carefully!

Scattered through this bulletin are four questions. Did you notice them? If not, go back and read this over again! If you read them all, here are the answers.

- The coin was dated 46 B.C. How could they know the date when Christ would be born?
- B. There can be dirt around it, but no dirt in it if you have a hole.
- C. You would light the match first.
- If he is living, you can't bury him anywhere.

The largest gem beryl ever found was a 220 lb. aquamarine, size of a nail keg. It was so clear that the Brazilian native who found it could see through it end to end. It yielded 200,000 carats of gems!

book comb in a new type of program some



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