

FEBRUARY 1992

THE ROCKFINDER



Margaret Heinek
Michiana Gem & Mineral Society
7091 E. East Park Lane
New Carlisle, IN 46552

FIRST CLASS MAIL



MICHIANA GEM AND MINERAL SOCIETY

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The MICHIANA GEM AND MINERAL SOCIETY, a non-profit organization, is affiliated with the MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES and with the AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES.

Regular Meetings

Time: 2:00 p.m. EST	Place: Westminster Presbyterian Church
Fourth Sunday of each month	1501 W. Cleveland Road
June - Field Trip Meeting	South Bend, IN
July - No meeting	West of the St. Joseph River
August - Annual Club Picnic	
December - Date to be announced - Christmas Party	

Dues

Individual	\$ 6.50 per year
Family	10.00 per year
Junior	2.00 per year

Rockfinder Staff

Editor.....Joyce Larson	144 Spruce Dr., Westville, IN 46391
Co-Editor.....Margaret Heinek	7091 E. East Park Ln., New Carlisle, IN 46552
Staff.....Bob Heinek/Club Members	

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THE ROCKFINDER

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NUMBER - 2

FEBRUARY 1992

PUBLISHED BY: MICHIANA GEM AND MINERAL SOCIETY

SOUTH BEND, IN

MEETING: 2-23-92
Doors Open 1:30 p.m.
Meeting at 2:00 p.m.

PLACE: Westminster Presbyterian Church
1505 W. Cleveland Road
South Bend, IN
West of the St. Joseph River

HOSTS: Joe Kossack
Jo Kytta
Phyllis Smallwood

PROGRAM: "A Hands On - Jewelry Making Program" for all members.

HAPPY BIRTHDAY WISHES TO:

Sister Jeanne Finske..... 5
Marcella Nagy..... 8
Al Nagy.....18
B. J. Burkhart.....19

GEO - LOGICAL TERMS

PETRIFICATION TECTONIC STATUM ORE
LITHOSPHERE LEACHING MAGMA ROCK
EARTHQUAKE PLUTONIC FAULT CORE
WEATHERING VOLCANO CRUST SEAM
STALAGMITE MINERAL STALAGTITE
.....EROSION.....

P L U O S T R A T U M M A G T
W E A T H E R I N G T T R O P
E A T S L N L O E A R O R E L
L R O R I O I O C D S N E A U
E T C H I N T G G K T A T A T
A H O S U F H N M F A C G L O
C Q R T C M I U S A L L E H N
C U E B A H O C P U A O R E I
I A X E C Q S R A L G V O C C
N K S A U A P U R T M C S W L
D E E A M O H S U S I T I S S
T L C G P E E T R I T O O R O
C D A L T E R V O L E T N O I
E M R O C T E M I N E R A L T
T E T I T G A L A T S S E E F
(-via Rock News)



BIRTHSTONE FOR FEBRUARY - AMETHYST

BRIGHT LIGHTS

The following words are light qualities found in gemstones:

- | | |
|---------------|------------------|
| 1. asterism | 4. silk |
| 2. chatoyancy | 5. birefringence |
| 3. dispersion | 6. pleochroism |

- a. separation of white light into its component colors.
- b. luminosity in the form of a star.
- c. iridescent luminosity causing a thin bright line (cat's eye).
- d. network of long needle-like inclusions.
- e. a difference in light absorption in various directions, causing color changes.
- f. double refraction.

(Answers on page4)

MINUTES OF JANUARY 1992
MICHIANA GEM & MINERAL SOCIETY

President Heinek opened our regular meeting at 2:05 p.m.

Guests were Rick Mann and Leo Gilligan.

Dick Scherer is in the hospital. We all wish him well.

Hostesses this month were Marie Crull, Jessie Zeiger, and Gordon Dobecki. Thank you all for the wonderful treats!

Gordon Dobecki plans to start a new session of classes in late February or early March. Contact him if you're interested.

We may try to plan a field trip to Rensselaer to meet a family from Illinois for a day of collecting. See Ed Miller if you're interested in this pyrite/fossil hunting trip.

Marie Crull moved to accept the minutes of the November meeting as published in the Rockfinder. Motion was seconded and passed.

Sister Jeanne gave the treasurer's report, which will be filed for audit.

Bill Crull moved that we lease a larger storage area so that all the club belongings can be stored in one place. The motion was seconded and passed. Margaret will make necessary arrangements.

The 1992 Midwest Federation show will be in Ohio. The 1993 Midwest Federation show will be a fieldtrip to northern Michigan.

Bob Miller's carving will be on the cover of the March Lapidary Journal. CONGRATULATIONS, BOB!!! If members are interested in subscribing to the journal, contact Margaret; she'll see if we can get a group discount.

Great thanks to Joyce Larson for all her hard work with the Rockfinder.

She's doing a great job, and we all appreciate her efforts!

Bob Heinek spoke about legislation concerning public lands and urged members to contact their senators if they are interested in the outcome of the legislation. Bob has further information for those interested.

Door prizes went to Danny Zeiger, Brian Hess, Alec Rubenstein, Jerry ("Red") Goble, Jo Kytta, Kenny Stout, and Deb Wilson.

Gordon Dobecki presented an interesting program on his classes. He spent a lot of time and effort making his video tape and bringing in and arranging his display case. Thank you, Gordon!

There were 31 adults, 4 children and 2 guests present.

Respectfully submitted,

Pam Rubenstein

Sincere sympathy to Joan Scherer and Diane Bowman on the passing of Dick Scherer, husband and father. Dick will be greatly missed by all who were fortunate to know him. I'm glad to have been one of those people. I recall one thing vividly when we lost our mother. The pastor of my sister's church in Wisconsin sent one red rose with a card that read, "Welcome to your new home". That thought helped.

Joyce

BITS & PIECES - MINERAL CHANGES DUE TO WEATHERING:

- . Feldspar changes to clay.
- . Olivine & hornblende change to serpentine or chlorite rocks.
- . Impure limestone may dissolve and leave clay.
- . Pyrite changes to limonite & 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.

(continued page 4.....)

GEMSTONES FOUND IN THE UNITED STATES

Because our nation has not had a tradition of mining and providing gemstones for the world, we often forget we can find in our own country most of the well known gems as well as a variety of lesser known but equally desirable stones. Gemstones found in our own country rival those found anywhere in the world in beauty and desirability.

DIAMONDS: Have been found in many states including Texas, Arkansas, the Great Lakes area, California, Michigan, Illinois, Ohio, Kentucky, New York, Idaho and Indiana.

SAPPHIRES: Montana has several places where sapphires are found, in all colors.

RUBIES: Have been found in Jackson, Macon and Clay Counties, North Carolina.

TOURMALINE: Riverside and San Diego counties in Calif. have produced the largest quantity of gem tourmaline with the greatest value in the western hemisphere. Maine is also a major producer in a full spectrum of colors, including a bi-colored red or pink and green.

EMERALDS: North Carolina has emeralds that compare favorably with fine Colombian stones. It is the only state that produces significant quantities.

AQUAMARINE: Is found in Oxford County, Maine Chaffee County (Mt. Antero), Colo., Riverside and San Diego Counties, Calif. and Cheshire, Sullivan, Merrimack and Grafton Counties, New Hampshire. Most of these areas produce Aquamarine as a by-product.

MORGANITE: Is found where aquamarines and emeralds are found because this stone is a beryl as are aquamarine and emerald. Morganite is found in much larger sizes and is much more affordable. Colors range from pink to shades of orange.

RED BERYL: Though quantities are small, the Wah Wah Mountains of Utah are the only source of this gemstone in the world.

TOPAZ: In the U.S. yellow topaz is rarely seen, but good blue, sherry and colorless stones can be found in many places. In Mason County, Texas one can find gem quality blue and colorless stones. In Utah sherry-brown crystals are found. In San Diego County, Calif., commercial quantities of blue and pale green topaz are found. Colo. produces pale blue.

PERIDOT: Gila County Ariz. is the most productive source of peridot in No. Am. Dona Ana County, New Mexico also.

AMETHYST: Is found in most states in all quantities and size.

GARNET: Gem-quality in a variety of colors have been found in Ariz., Calif., Colo., Kentucky, Penn., Maine, New Hamp., New Mex., No. Carolina, Vermont, Virginia, Washington and many other states.

BENITOITE: One of the rarest and most beautiful of gems in the U.S. can be found in gem quality only in San Benito County, Calif. It occurs in various shades of blue, purple, white, pink and colorless. Unlike sapphire benitoite is relatively soft.

KUNZITE AND HIDDENITE: Are varieties of the gem spodumene. Danzite is found in good shades in the U.S.

JADE: The most important source of jade "Nephrite" in the Western Hemisphere is Wyo. Alaska also produces good green Nephrite, Calif. has Jade (Jadeite).

TURQUOISE: America is the largest producer in the world. It is found in Ariz., Colo., Nevada and New Mexico.

OPAL: Idaho has produced fine gem-quality white opal. Fine black opal has been found in Virgin Valley, Nev.

PEARLS: Many fine natural fresh water pearls come from the upper Mississippi River. Fine round pearls are rare. The area produces many pearls in rich shades of yellow, violet, pink and nearly black. The abalone mullusk off the Calif. coast produces "blister" and free form abalone pearls. They are also colorful green, yellow and pink, and possess deep shades like the Mississippi River ones.

North America is a gem-rich country. With the great potential the U. S. has in gem stone production, America is on its way to finding its due place in the world of gems.

(-taken from an article written by Antoinette Matlens called "Native American Gemstones: One of Our Best Kept Secrets" found in the NATIONAL JEWELER -Jan 89.....
-via Color Country Chips, Rock Chips & CFMS Newsletter)

(P.S. - This was Margaret's page but something happened to the U.S. Mail???)



MINERAL CHANGES DUE TO WEATHERING, Cont.

- . 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.

(-via Cycad, Geo-Logic, Pebble Pusher and Rock Rustler News)

BRIGHT LIGHT (Answers)

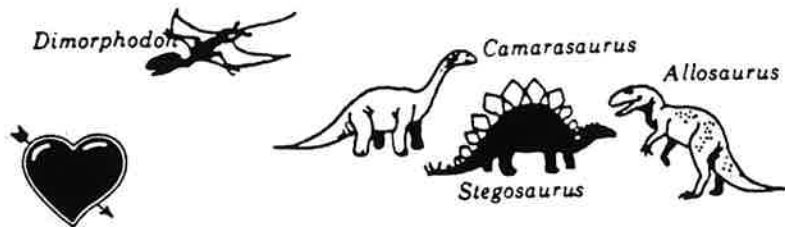
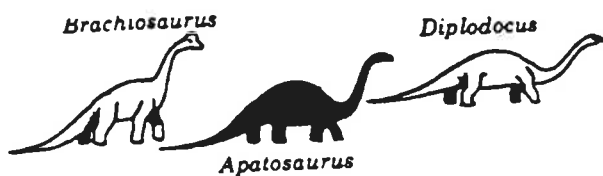
1-b, 2-c, 3-a, 4-d, 5-f, 6-e

FOSSILS...PREHISTORIC LIFE

There is a superb brochure called DINOSAURS and Dinosaur National Monument, that can be procured from the National Monument that is available & referred to as "A Resource Packet for Students & Teachers." Inside the cover it says: Teachers may reproduce as many pages from this packet as they wish for educational use in the classroom. Please note - for teachers in the classroom. Reproduction for resale or any other purpose is strictly forbidden. The brochure would be wonderful if the privilege were extended to paleontology clubs or study groups for teaching children. But I fear we are not so lucky. You can order one for teaching your children or grandchildren, and the address is:

Dinosaur Quarry
 Dinosaur National Monument
 Box 128
 Jensen, Utah 84035

(-via MWF Newsletter-Jan 1992)



UNSOLVED MYSTERIES OF OUR WORLD'S PAST

A cube of metal, carefully machined, notched and rounded on one side, was found in the center of a block of coal in Austria in 1885. It's still in a museum in Salisbury and no one can explain it. Basing their conclusions on the age of the coal bed, various experts estimate it to be 300,000 years old.

Workmen found a piece of gold thread embedded in eight feet of rock at a quarry in Rutherford Mills, England. The London Times reported this discovery in June of 1844, and the experts say it has to be sixty million years old. Who could have dropped a gold thread in England sixty million years ago?

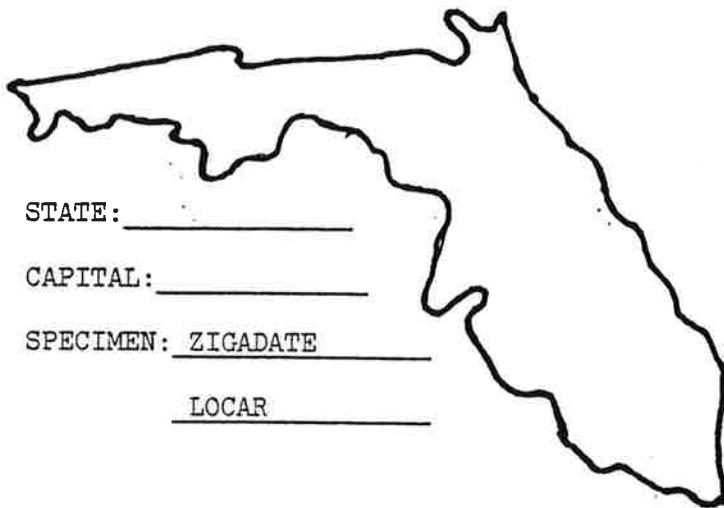
Perhaps these items were the handiwork of the same people who made the strange pieces of very ancient pottery which have been found in rock quarries and coal mines around the world, along with steel nails, perfect glass lenses, and even, believe it or not, bones of prehistoric animals with bullets in them. Giant chains have been found imbedded in great rocks in both North and South America; not merely embedded, but actually passing through the rock!

Another enigma is the "Plain of Jars" in Laos. It came by its name because it is literally strewn with huge stone jars..some over six feet high. Some are so huge they can hold six men. There are over a thousand of these peculiar artifacts scattered over a high plateau surrounded by mountains. Carved of limestone and granite no one knows who carved them, when or why!

(-via M.M.S. Conglomerate)

A bore is a rockhound who can change the conversation to his rocks faster than you can change it back to yours.....

(-via The Rocky Reader)



ANKYLOSAURUS

(ang-KILE-uh-sawrus)



This dinosaur was the largest, heaviest and most heavily defended of the ankylosaurid family. Its body was armor plated all over.



Ankylosaurids were armored dinosaurs with short legs and barrel-shaped bodies. Also, short necks and stood low on the ground. Its bony slabs, plates and spikes were set into its skin, under this is where the flesh grew thick like panels of leather. This dinosaur had small teeth with little muscle power in its jaws.

Ankylosaurus was successful in its family at surviving. A lot of these dinosaurs were around at the end of the dinosaur age. Several fossil skeletons were found in Canada, it seemed by the fossils it had survived by hiding under their armor. The Ankylosaurus had a large bony club at the end of its tail. It used its tail to defend against flesh eaters, possibly crushing their skulls.

Length: 35 feet
 Weight: 5 tons
 Lived: Late Cretaceous
 Found: United States & Canada

Information from: The Rourke Dinosaur Dictionary by Joseph Hicks.
 Submitted by: Mike McCluskey Jr. Member of the Gem City Rock News

-JUNIORS: As of February 1992 you should now have 26 specimens. At our next meeting I will put a drawing of the United States for all members to review, on our display table. We have specimens from all states high-lighted in yellow. Anyone having some rocks from the "white" states please let me know. Would appreciate some contributions. Many thanks.

Your Editor -----Joyce

WELCOME NEW MEMBER

LEO GILLIGAN - Wife Mary Ellen
1445 Riding Mall
South Bend, IN 46614
Phone: 291-6074

Glad to have you as part of the group!



Juniors: Do you remember my asking last month for one of you to start off with a Jr. report for our bulletin????????? I'm waiting!

AMETHYST - QUEEN OF VIOLET GEMS

The word "amethyst" brings visions of violet clusters of six-sided quartz prisms having pyramidal ends. These silicate gemstones glimmer and glow as light shines upon them. Much variation exists in color tone among the crystals, but it is always in the violet range and is the purest violet of all gems, ranging from pale blue-violet to deep reddish violet. The color is partly caused by the presence of iron ions. It may fade in the presence of light or may even change color at very high temperatures, but the color can usually be revived by irradiation. All other factors being equal, the deeper the color the more valuable the stone.

The crystals may be short or long and frequently appear as linings in cavities formed when underground gases blow elongated bubbles in molten rock. In cases where the center of such a cavity remains empty with the tips of the crystals protruding into it, the formation is called a geode. The outer rock, frequently hard chalcedony, remains intact with the crystalline beauty hidden within, even after surrounding materials are eroded away. Only by breaking the geode are the amethysts revealed.

Other "blow-outs" made cave-like openings bearing linings of various quartz crystals, including amethysts. One of the most recent discoveries of such a pocket was made in November 1974 in South Carolina. The cavity's lining was a magnificent mass of crystals in the amethyst's complete color range. They were free float crystals (crystals forming in an opening with no interference from surrounding hard material), and they were surrounded by soft sandstone. The total yield was 500 pounds of this queen of violet gems. It was brought out in sections weighing as much as 150 pounds and contained crystals 5-3/4 inches down to 3/4 inches tall, the largest with a diameter of 4-1/4 inches. Just imagine the items that could be cut from such large crystals!

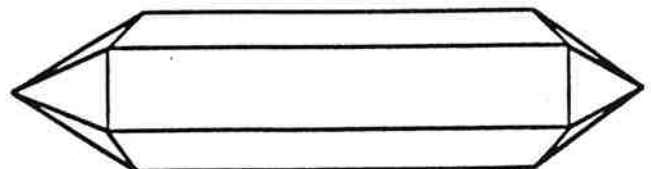
DIAGRAM SHOWING ONE-HALF OF A TYPICAL AMETHYST CRYSTAL.....

The amethyst was known to ancient peoples, but it was scarce and highly prized. It is one of the biblical stones whose name remains the same in all versions of the Bible and was the third stone in the third row of Aaron's breastplate. It is still the traditional stone in ecclesiastical rings worn by bishops and other present-day church potentates. In biblical days, the greatest source available to early Israelites was probably Ceylon, the treasure chest of many fine gems.

Before 2000 B.C., amethysts were used in making Egyptian amulets in the form of the sacred scarab beetle. In the Roman and Greek empires, other configurations were engraved as an art form on the stone. During medieval times, these figures took on special meanings, especially when certain images were engraved on particular stones. For example, "A bear engraved on an amethyst has the virtue of putting demons to flight and defends and preserves the wearer from drunkenness." This idea probably goes back to early days when the amethyst was referred to as "the deceiver," a reputation gained by an unusual use of the gem. On festive occasions, noblemen sometimes imbibed too much wine. It was then that water or cheap, watered-down wine was served in amethyst goblets, thus keeping the men from becoming embarrassingly inebriated.

Amethysts were, of course, used for royal jewelry. Catherine the Great was famous for her collection of especially magnificent specimens of red-violet gems which were obtained from the Ural Mountains and called Siberian amethysts. England's Queen Charlotte wore amethyst beads valued at \$10,000 in the 18th century, and the large stone which adorns St. Edward's crown is the oldest of the English crown jewels, having been worn by Edward the Confessor in 1042.

(continued page 7)



(Cont. from page 6 - AMETHYSTS)

The use of amethysts, as well as topazes and aquamarines, came into Paris' fashions after 1815. A complete set of amethyst jewelry, composed of a tiara-comb, earrings, necklace, brooch, and a pair of bracelets of the period now belongs to the Metropolitan Museum of N. Y. City.

The English Morning Post for January 30, 1800 pointed out that topazes and amethysts were the most fashionable stones for necklaces and earrings. In 1806 Miss Mitford, a nineteen-year-old novelist, tells of meeting Mrs. Beaumont, who was wearing a necklace, bandeau, tiara, cestus (belt), armlets, bracelets, brooches, and shoe knots all set with large amethysts. "All these, she wore," said Miss Mitford, "And I must confess for a small dinner party, appeared rather too gaily decorated."

Time and fashions change, and once in awhile amethysts have a season of popularity. However, they are not as highly valued as they once were, for with the discovery of new sources in Uruguay and Brazil in South America, in the Aswan District of Egypt, in parts of Arabia, and in a number of places in the United States, they became more common. No matter the value, the amethyst, natal stone of February, is a gem of great beauty, and it well deserves a place on the list of birthstones.

(by Joan Hunter, Curator of Education Living Museum, Illinois State Museum and The Rock Rustler News)

COMING EVENTS: Mark your calendars!

FEB. 22-23 Southfield, Michigan
International Gem & Jewelry Show
Southfield Pavillion

MARCH 13-15 Richmond, Indiana
Eastern Ind. Gem & Geological Society
Wayne County 4-H Fairgrounds
North Salisbury Road

MARCH 14-15 Livonia, Michigan
The Roamin Club/Schoolcraft College
18600 Haggerty Road

MARCH 14-15 Waukesha, Wisconsin
Kettle Moraine Geological Society
Catholic Memorial High School
601 E. College Avenue

MARCH 20-22 Dayton, Ohio
Great Amer. Gem, Mineral & Jewelry Shop
Dayton Convention Center

APRIL 3-5 Flint, Michigan
Flint Rock & Gem Club
Williams Community Education Ctr.
3501 Minnesota Ave.

APRIL 4-5 Des Plaines, Illinois
Des Plaines Valley Geological Society
2025 Miner St.

APRIL 10-12 Hazel Pk. (Detroit) Mich.
Holiday Inn, 1 W. Nine Mile Road

APRIL 10-12 Mt. Clemens, Michigan
Mt. Clemens Community Center

APRIL 10-12 Cleveland, Ohio
IX Center, 6200 Riverside Drive

APRIL 17-19 Jackson, Michigan
Michigan Gem & Mineral Society
1300 W. North St.

MAY 2-3 Lafayette, IN
Wabash Valley Gem & Mineral Show
Tippecanoe County Fairgrounds

MAY 2-3 Kalamazoo, Michigan
Kalamazoo Geological & Mineral Society
Kalamazoo County Fairgrounds

MAY 8-10 Chicago, Illinois
O'Hare Expo Center

MAY 15-17 Dearborn, Michigan
Midwest Mineralogical & Lapidary Society
Dearborn Civic Center

MAY 16-17 Wauwatosa, Wisconsin
Wisconsin Geological Society
Hart Park

MAY 23-25 Wheaton, Illinois
DuPage County Fairgrounds

MAY 29-31 Cleveland, Ohio
IX Center

THE WORD IS OUT - CURRENT COLLECTING RULES ON FEDERAL LANDS - PETRIFIED WOOD

Federal Register 43 CFR Ch 11 (10-1-89 Edition) Subpart 3611 on 'Petrified Wood' states in part that no application or permit for free use is required except for specimens over 250 pounds in weight. All public lands administrated by the BLM and Bureau of Reclamation are open to or available for free use removal of petrified wood. Paragraph 3622.4 states:

- 1) The maximum quantity of petrified wood that any one person is allowed to remove without charge per day is 25 pounds in weight plus one piece, providing that the maximum total amount that one person may remove in one calendar year shall not exceed 250 pounds. Pooling of quotas to obtain pieces larger than 250 pounds is not allowed.
- 2) Except for holders of permits under Subpart 3621 of this title to remove museum pieces, no person shall use explosives, power equipment, including, but not limited to, tractors, bulldozers, plows, power shovels, semi-trailers, or other heavy equipment for excavation or removal of petrified wood.
- 3) Petrified wood obtained under this section shall be for personal use and shall not be sold or bartered to commercial dealers.
- 4) The collection of petrified wood shall be accomplished in a manner that prevents unnecessary and undue degradation of land.

Subpart 8365.1-5 Property and Resources states:

- (a) On all public lands, unless otherwise authorized, no person shall:
 - 1) Willfully deface, disturb, remove or destroy nay personal property, or structures, or scientific, cultural, archaeological, or historic resource, natural area; or
 - 2) Willfully deface, disturb, remove or destroy plants or their parts, soils, rocks or minerals, or caves resources, except as permitted under paragraph (b) or (c) of this paragraph; or
 - 3) Use on the public lands explosive, motorized or mechanical devices, except metal detectors, to aid in the collection of specimens permitted under paragraph (b) or (c) of this paragraph.
- (b) Except on developed recreation sites and areas, or where otherwise prohibited and posted, it is permissible to collect from public lands reasonable amounts of the following amounts for non-commercial purposes:
 - 1) Commonly available renewable resources such as flowers, berries, nuts, seeds, cones, and leaves.
 - 2) Non-renewable resources such as rocks, mineral specimens, common invertebrate fossils and semi-precious gemstones.
- 5C) The collection of renewable or non-renewable resources from public lands for sale or barter to commercial dealers may be done only after obtaining a contract or permit from an authorizing officer in accordance with Part 3610.

Note: Many states have similar laws which cover parks, forest lands and road right-of-ways. Check with State Geological Survey offices and/or the sheriff's office.

(-by John Boland, AFMS Newsletter)

THE EGYPTIAN ALPHABET

When I was in California over the Xmas holiday, my daughter, grandson Jordan, whom some of you met when he attended our picnic, made a stop at the Rosicrucian Egyptian Museum in San Jose. There, I picked up a small brochure on the Egyptian alphabet. I made some copies of same, they are on the table. I thought the kids (young & not quite so young) might have fun trying to spell their names.

Joyce



Wear a smile and have friends -
Wear a frown and have wrinkles.....

You've reached middle age when your spouse tells you to pull in your stomach... ..and you already have!

THE PENNSYLVANIAN AGE IN INDIANA - Part 3 Feb. 1992
by Paul Godollei, Club member

The Mansfield Sandstone at the base of the Pennsylvania is a coarse brecciated conglomerate that grades into coarse sandstone. Color varies from light grey, through buff, yellow, yellow-brown and red. In places it is a massive sandstone and in other areas it is more laminated and cross-bedded. It is more durable than the underlying rocks, and thus forms overhanging cliffs along Sugar Creek and is called the Shades of Death at Turkey Run State Park.

It marks a period of the inflow of the sea. The Mansfield Sandstone extends from northern Warren County to the Ohio River.

There is limited coal in the Mansfield group in several places and not sufficient for commercial mining. Some of the sandstone is suitable for building stone. It was also used for making millstones, whetstones and grindstones. Coal I is in the Mansfield, while Coal II is found in northern Clay and Vigo Counties. The coal beds are usually localized, with only the thicker beds extend over great areas. The coal was mostly formed in several separate basins. The 23rd Annual Report of 1898 gives a detailed description of each coal layer and won't be detailed here. I could not locate a copy. Most Indiana coal is of the Bituminous variety, and is of the coking and non-coking classes, with some cannel coal, which is hard, compact, and has a dull lustre. Block coal splits in thin sheets parallel to the bedding, but is difficult to split in the cross beds. It occurs in Brazil and Clay County. The coal beds in Indiana occur between two great beds of sandstone, the Mansfield at the base and overlying all the beds is the Merom sandstone of Division IX. No fossils have been found in it, and Blatchley was of the opinion that it was of Triassic age.

In 1903, the price of coal ranged from \$1.15 to \$1.45 per ton. There were 15, 128 mine employees, and the average annual wage was \$604.14. Production reached 9,992,553 Gross tons. Thirty seven new mines opened in 1903.

Clay County produced 1,222,431 tons by 1687 miners, Daviess County, 191,159 tons by 329 miners, Fountain County 16,635 tons by 66 miners, Gibson County 46,700 tons by 54 miners, Greene County 2,226,789 tons, by 2059 miners, Knox County 137,949 tons by 166 miners, Parke County, 922,994 tons by 1177 miners, Perry County 11,120 tons with 20 miners, Pike County 484,258 tons with 616 miners, Sullivan County, 1,553,338 tons with 1361 miners, Vanderburg County, 204,648 tons by 222 miners, Vermillion County, 942,165 tons by 767 men, Vigo County, 1,716,726 tons, by 1828 miners, and Warrick County had 276 miners and produced 315,641 tons.

Electric chain mining machines, ventilating blowers, and other improvements for safety were introduced that year. In 1881, 10 men were killed in mine accidents. In 1903 it was 55.

The next report will discuss the types of fossils to be found in each formation.

Bibliography: Indiana Dept. of Geology and Natural History, 15th Annual Report, 1886, by Maurice Thompson, State Geologist--pp 12, 18-25
Indiana Dept. of Geology and Natural Resources, 21st Annual Report, 1896, by W. S. Blatchley, State Geologist--pp 8-10, pp 97-105
Indiana Dept. of Geology and Natural Resources, 28th Annual Report, 1903, by W. S. Blatchley, State Geologist - pp 16-20m pp 67-75, pp 259-356.

METEORITES: Want some meteorites? Simply run a magnet down your rain trough or along the ground under the eaves. Those small particles sticking to the magnet will be meteorites! They fall all the time. (-via Osage Hills Gems & Rock Rustler News)



GEOLOGIC MAP OF INDIANA

GLOBE-TROTTING ROCKHOUND

He treasures every rock he finds, he can't resist a pebble --
 Although his house will hold no more, his stockpile seem to treble!
 He rakes the desert, scours the beach, a mountain is his altar --
 With glinting eye he contemplates "The Great Rock of Gibraltar!"
 (-via Nelson NZ Rock Shop & Rollin Rock Club)

GEOLOGIC TIME SCALE

<u>ERA</u>	<u>PERIOD</u>
	QUATERNARY Present to 11000 years ago
CEZOZOIC	PLEISTOCENE
	1.8 million years ago
	TERTIARY (not found in Ind./Ohio)
MESOZOIC	65,000,000 years ago
	CRETACEOUS
	136 million years ago
	JURASSIC
	TRIASSIC (not found in Ind./Ohio)
PALEOZOIC	225 million years ago
	PERMIAN
	PENNSYLVANIAN
	MISSISSIPPIAN
	DEVONIAN
	SILURIAN
	* ORDOVICIAN *430 to 500 million yea
	CAMBRIAN
570 million years ago	

PENNSYLVANIAN (INDIANA)

Series	Formation	Principal coal beds
Conemaugh	New Haven Formation	
	St. Wendels Sandstone	
	Parkers Formation	
	Dickburg Hills Sandstone	
	Hazelon Bridge Formation	
	Ingfield Sandstone	
	Ditney Formation	
	West Franklin Limestone	
	Shelburn Formation	
Allegheny	Dugger Formation	Coal VII Upper Millersburg Coal Lower Millersburg Coal Coal VI
	Petersburg Formation	Coal V Coal IVa
	Linton Formation	Coal IV Coal IIIa
	Staunton Formation	Coal III
Pottsville	Brasil Formation	Coal II Minshall Coal Upper Block Coal Lower Block Coal
	Mansfield Formation	

THE ROCKFINDER

MARGARET'S COLUMN:

This will be a very short column this month. Bob and I have been very busy with Bob's ill brother. Trying to get him back on his feet so he can return to his home. Things are beginning to loosen up, and we can see 'daylight'.

We had planned a work session for the next meeting, everyone could have had a chance of making jewelry for themselves. I found out Debbie Willsey was going to a big show out west, and asked her to see if she could pick up some flat stones we could use for the project. Debbie called me last night and said she had been unable to get enough for what I wanted, but Bob and I are still planning on trying the work session. So come prepared to work. If you have small stones or beads that can be strung on wire, bring them, at least enough for your self, about 8-10 stones. The women can make necklaces and the men can make a bola for themselves. Each person will have to furnish your own chains or bola strings.

We had a former member pass away, Doris Pletcher, last week. Doris and Carlton joined the club at the same time Bob and I became members. Carlton was president of the Michiana Society and the two of them were editors of the ROCKFINDER. They had been away for several years so many of you would not have known them. Our sympathy goes out to Carlton and Sharon (their daughter).

Jess Wise is back in the hospital. Bob and I went to see him in Niles and gave him the regards from the club. Bess was there, it was good to see her. We hope she will be able to attend some of the meetings. Jess has been ill for so long and was not able to attend. I talked to Diane Bowman a while ago at the Memorial Hospital and she said her dad will have heart by-passes when he is able. He had developed a blood clot in his leg. GET WELL FAST! I hope by now he is on the mend.

The Lapidary Journal goofed in the Feb. issue and listed our show as August instead of September. I called them and hopefully they will get it right in the next issue. I had even sent them a flyer, with the right dates! If your subscription need to be renewed, see Sister Jeanne and she will renew it through the club.

Well I promised to make this a short column, so I will look forward to seeing you at the next meeting.

Margaret

