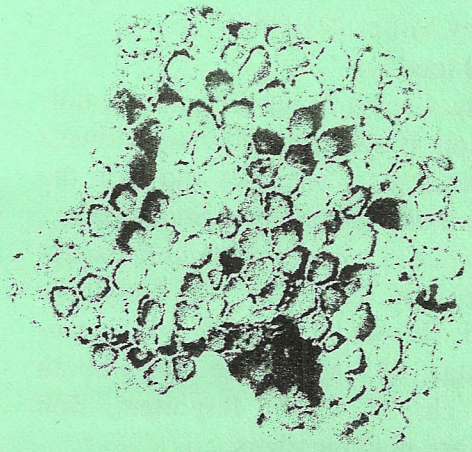
THE ROCKFINDER

Michiana Gem & Mineral Society
Tom Noe, Editor
305 Napoleon Blvd.
South Bend, IN 46617



Perry, Martha
58075 Potawatomi Dr
Osceola, IN 46561

46561+3638 03

MICHIANA GEM & MINERAL SOCIETY, INC.

AFMS

SCRIBE

MID WEST FEDERATION

THE ROCKFINDER

SEPTEMBER, 2002

MICHIANA GEM & MINERAL SOCIETY

2002 BOARD OF DIRECTORS

President.: Don Church 616-651-7616
Vice-Pres: Margaret Heinek 654-3673
Secretary: Sr. Jeanne Finske 284-5903
Treasurer: Bob Heinek 654-3673
Liaison: Sally Peltz 616-683-4088
Past Pres.: Margaret Heinek 654-3673

The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary knowledge and techniques.

General meetings are held the fourth Sunday of each month, 2:00 PM, EST, at Our Redeemer Lutheran Church, 805 S. 29th St., South Bend, IN. Regular exceptions include May (third Sunday), July (no meeting), August (club picnic) and the November/December meeting and Christmas party. Board meetings are held before the general meetings. The annual club show is Labor Day weekend.

✂----------

Yearly Membership Dues (Payable by January 1)
_____Individual $10.00 per year
_____Family $15.00 per year
_____Junior $1.00 per year
_____Subscriber $7.50 per year

Please indicate areas of special interest.
General Geology____ Beads ____
Gems & Minerals____ Fossils _____
Cabochons_____ Field Trips ____
Faceting_____Crystals _____
Carving_____Micromounts _____
Other_____Jewelry Making_____

Name_____

Street _____

City, ST., Zip _____

Please send your dues and this form to
Michiana Gem & Mineral Society
c/o Bob Heinek
7091 E. East Park Lane, New Carlisle, IN 46552

HEADS OF COMMITTEES

Programs	Margaret Heinek 654-3673
Hospitality	Pat McLaughlin 259-1501
Educational	Emily Johnson
Librarian	Diane Gram 272-6885
Historian	Ed Miller 498-6513
Sunshine	Sally Peltz 616 683-4088
Publicity	Phyllis Luckert 282-1354
Field Trips	Kathy Miller 291-0332
Membership	All Members

The Michiana Gem & Mineral Society, a not-for-profit organization, is affiliated with the Midwest Federation of Mineralogical Societies and with the American Federation of Mineralogical Societies.

The Rockfinder is published monthly except July and August. Editor, Tom Noe, 305 Napoleon Blvd., South Bend, IN 46617 (ph. 289-2028). Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617 (ph. 282-1354). Reporters, Bob Heinek, Herb Luckert, club members.

Additional names:
Name_____
Birthday_____

Name_____
Birthday_____

Name_____
Birthday_____

Name_____
Birthday_____

Date of Wedding Anniversary _____

Phone_____

PLEASE READ AND SIGN THIS SECTION:
With my signature I hereby release the Michiana Gem and Mineral Society, Inc., and its individual members and the owners of any premises upon which I enter under permit granted to the society, absolutely free of any liability whatsoever, to my person or my property, and further I will respect the equipment and property of the aforesaid owners.

Signed_____Date _____

THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

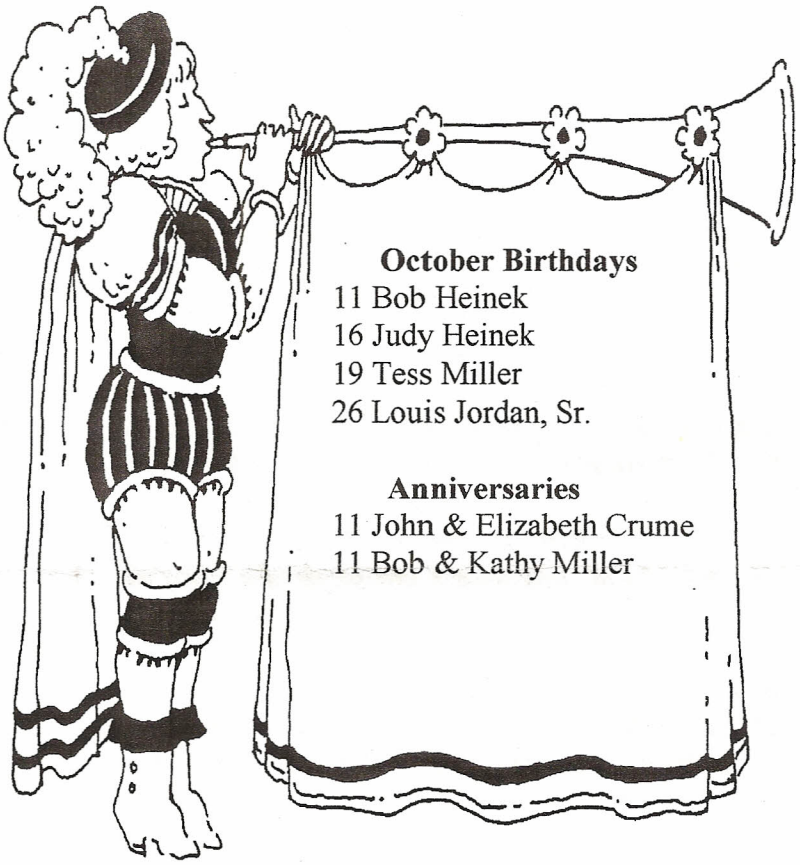
Volume 42, Number 7 **September, 2002**

Meeting: Sunday, September 22, 2002
Doors open at 1:30 p.m.
Meeting starts at 2:00 p.m.

Place: Our Redeemer Lutheran Church
805 S. 29th St. (19th & Wall)
South Bend, IN

Program: "My Other Hobby." Some members will talk briefly about their hobbies other than rocks.

Refreshments: Bob Conrath
Emily Johnson, Bill Nelson



October Birthdays
11 Bob Heinek
16 Judy Heinek
19 Tess Miller
26 Louis Jordan, Sr.

Anniversaries
11 John & Elizabeth Crume
11 Bob & Kathy Miller

UP AND COMING

Sept. 21-22: Geology Art Fair, Eddy Geology Center, Chelsea, MI.
Oct. 5-6: Midwest Federation show, Springfield, IL.
Oct. 5-6: Southeast Federation show, Jacksonville, FL
Oct. 11-13: Michigan Mineralogical Society show (Detroit), South Macomb Community College, Warren,
September 13-15: Tulip City Gem & Mineral show: Holland Civic Center, Holland, MI.
September 21-22: 2002 Geology Arts Fair, Eddy Discovery Center, Chelsea, MI.
Sept. 21-22: Falls Fossil Festival, Falls of the Ohio State Park, Clarksville, IN.
Sept. 22: Fossil Fest, Sylvania Historical Village & downtown Sylvania, OH.
Oct. 4-6: Treasures of the Earth fall show, Indianapolis, IN.
Oct. 18-20: Three Rivers Club show, Allen County Fairgrounds, Fort Wayne, IN.
Oct. 11-13: Greater Detroit Gem & Mineral Show, South Macomb Community College, Warren, MI.
Oct. 19-20: South Suburban Earth Science Club show, Prairie State College, Chicago Heights, IL.
Oct. 19-20: Flint Rock Club show, Carter Middle School, Clio, MI.
Oct. 25-27: Central Michigan Lapidary show, Ingham County Fairgrounds, Mason, MI.
Oct. 26-27: Evansville Lapidary Society show, Washington Square Mall, Evansville, IN.

MINERALS OF THE WRONG FEATHER DON'T FLOCK TOGETHER

By Dr. Bill Cordua, U. Wisconsin-River Falls

Most rockhounds know that minerals are identified by their physical and chemical properties. Many also know that an important clue to mineral identification is association—certain minerals are often found together. For example, malachite is often found with copper, and gold is often found embedded in quartz. What many don't realize is that another important identification clue is that many minerals are NOT found together. For example, lazurite, sodalite and corundum are never found associated with quartz. As another example, beryl does not occur with dolomite in our local limestones. Well, why not? Doesn't that seem a bit arbitrary? Isn't "never" sort of a strong term to be used by a scientist? It turns out that there are good chemical reasons why this is so.

In some cases, it is simply a matter of a particular rock type not having the needed chemicals to make the minerals. There is no chemical incompatibility between dolomite and beryl, yet we don't find beryl in limestone. Why not? In order to make beryl, you need to have beryllium, a chemical present in, at best, trace amounts in most limestones. By analogy, you can't make a chocolate cake with no chocolate—no matter how hard you try. The fact that chemicals tend to segregate in certain places in our earth leads to the commonly observed mineral associations. Certain granites have lots of beryllium in them—it's an element that tends to accumulate in such magmas. Thus, beryl is found in granites, along with the typical quartz, feldspar, mica and tourmaline.

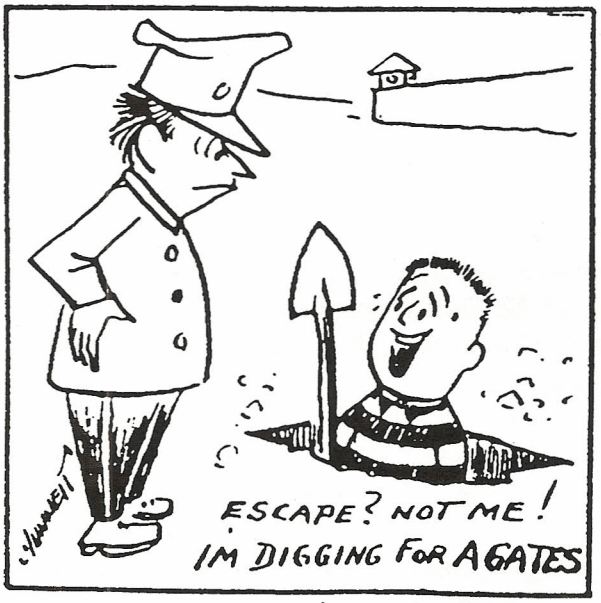
In other cases the mineral won't form because the proper temperature, pressure or other geochemical conditions (such as acidity) were not achieved in the rock. For example, diamond won't form in a rock unless certain conditions are met.

In yet other cases there is a true chemical incompatibility. It is because of this that quartz is never found with olivine, corundum, sodalite or lazurite. These minerals are just not chemically stable together. Does this mean if you put a piece of corundum next to a piece of quartz that they'll explode? Of course not. The point is that the two minerals will simply not form together in the same environment. If corundum forms, quartz won't form and vice versa. The reason is that corundum forms only in a low silica environment, but quartz only in a high silica one.

Let's consider a hot magma. There are no minerals in the magma—only loose atoms darting around. As the magma cools, these atoms begin to bond together to form minerals. Let's suppose this is a low silica magma. There are lots of other chemicals, such as aluminum around. The aluminum likes to link to what silica there is around to form feldspars. But since this is a low silica magma, there isn't enough to go around. The extra aluminum has to go somewhere, so, when it gets concentrated enough, it forms corundum. Now let's suppose this is a high silica magma. All the aluminum finds silica and makes feldspar. Now there is silica left over, so quartz eventually forms. In the first case, you have a rock formed consisting of feldspar and corundum, in the second case you have a rock formed consisting of feldspar and quartz. You can never get a rock with quartz and corundum forming together in it. There are similar relationships between quartz and sodalite, olivine and several other minerals.

So if someone offers you a specimen of corundum crystals embedded in quartz, start looking for the glue!

From www.uwrf.edu/~wc01



FLINT FLASHES September, 2001

THE NEANDERTALS:
Discovery, 1856-1857
By Sam Shapiro

In the first half of the 19th century, most European scientists firmly believed that all species had been created by the Deity, that they were immutable, and that *Homo sapiens* was not part of the animal kingdom. A revolution in biological thinking began in August, 1856, with the discovery of the first recognized human fossil in a cave 65 feet above the Neander river valley, near Dusseldorf. Some workers quarrying marble found a human skeleton stretched out in a thick layer of clay, its head turned toward the cave entrance. Thinking they were the remains of a cave bear, they discarded most of the bones, but the quarry's director saved the skull cap, the femurs, humeri, ulnas, a shoulder blade and a few ribs. He gave them to one of his friends, a natural history teacher named Fuhlrott, who lived nearby in the village of Elberfield.

Fuhlrott recognized that the bones were those of a human being. He was struck by the skull's appearance: a low vault, receding forehead, and especially the enormous brow ridges, resembling those of a gorilla. He was convinced that he had in his possession the remains of a remote ancestor, an intermediary between the great apes and *Homo sapiens*. At a conference in Kassel in 1857, the nature of the bones was fiercely debated. One scholar argued that the skull was that of an unintelligent hermit. The French scientist Franz Pruner-Bey argued that it was without doubt a representative of the ancient Celtic race. Others thought that they were dealing with a Russian Cossack, who had died there in 1814 during one of the last campaigns of the Napoleonic wars. Only the anatomist Hermann Schaafhausen shared Fuhlrott's point of view. He was convinced that he held in his hands the missing link between apes and men, proof of the animal origins of humankind.

Everyone waited for an opinion from the famous pathologist Rudolf Virchow (1821-1902), an undisputed authority in his field. Virchow examined the skull and concluded that it was not that of a normal man, but a malformed idiot who had been afflicted with rickets and arthritis. There the matter rested.

The idea that man was related to an ape was emotionally unthinkable, and religiously blasphemous. So the new bones were explained away as modern, those of a malformed idiot with rickets and arthritis. Well into the next century, as numerous new finds of Neandertals were made throughout Europe and the Middle East, they were portrayed as hairy, unintelligent, stooping creatures, unable to speak or think, given to cannibalism, with no relations to modern humans, but cousins to the chimpanzee.

A century of new finds and new interpretations has changed the old picture entirely. A recent book, Erik Trinkaus's *The Neandertals* (1992), sums up the current view of our nearest relations, now called *Homo sapiens neandertalensis.*

1. They lived from about 100,000 to 35,000 years ago. (*Homo sapiens* is older.)
2. They were spread over a huge region of the northwestern Old World, from Gibraltar north to Belgium, across to the Levant, around the Black and Caspian Seas, and east to Uzbekistan.
3. They were intelligent, with brains slightly larger than ours. Muscular and heavy-set, they could endure the harsh conditions of the ice ages in which they evolved, lived and eventually died. They made tools (scrapers, borers, spearheads, hand axes) by skillfully knapping flint, using their teeth as a "third hand."
4. They were social creatures, who lived in society and took care of one another. Some of them with serious injuries, or who were crippled or blind, were fed and sheltered, so that their wounds were healed.
5. They buried their dead, often placing food, weapons and even flowers in prepared graves. Apparently they believed in some sort of life after death.
6. Trinkaus concludes that *Homo sapiens* and the Neandertals coexisted in the Middle East without interbreeding, but that in parts of Europe "there is abundant evidence of continuous evolution, genetic admixture, and interbreeding." Some of us may have Neandertal genes. "But we must not forget that they were neither 'new and improved' versions of *Homo erectus* nor crude prototypes of modern *Homo sapiens*. They were Neandertals--one of the more distinctive, successful and intriguing groups of humans that ever enriched our family history."

QUAKE HITS INDIANA JUNE 17, ALONG NEW MADRID FAULTS

This earthquake was widely felt, with initial reports from as far away as West Virginia. The earthquake caused only minor damage in the immediate area of the event: broken glass, objects thrown off shelves, and cracked chimneys. No injuries have been reported.

The earthquake occurred in one of the more seismically active portions of the United States east of the Rocky Mountains. A large area covering southern Illinois, southwestern Indiana and parts of western Kentucky and southeastern Missouri has earthquakes rather frequently, by eastern U.S. standards. Most years, this area has a few earthquakes large enough to be felt, but, on average, damaging earthquakes occur about once a decade. The largest earthquakes from this region in the 20th century were the magnitude 5.5 southern Illinois earthquake of November, 1968, and the magnitude 5.2 southern Illinois earthquake of June, 1987. The magnitude 3.9 southern Indiana earthquake of December 7, 2000, had an epicenter very near that of today's shock. This seismicity is north and northeast of the well-known New Madrid seismic zone, which is in the bootheel of southeastern Missouri and adjacent Arkansas and western Tennessee. The earthquake occurred within the generally stable interior of the North American plate, far from currently active plate boundaries. The modern earthquakes in this part of the US are thought to result from the reactivation of ancient faults, which are being squeezed by stresses from the modern motion of tectonic plates.

In the past 10 years, geologists working in the area have found evidence of prehistoric earthquakes in the Wabash River Valley that were probably much larger than any historical earthquakes. Geologic evidence indicates that these prehistoric earthquakes occurred several thousand years ago.

USGS bulletin (June 18, 2002)

WORDS THAT SHOULD EXIST

1. AQUADEXTROUS (ak wa deks' trus) adj. Possessing the ability to turn the bathtub tap on and off with your toes.

2. CARPEPPETUATION (kar' pur pet u a shun) n. The act, when vacuuming, of running over a string or a piece of lint at least a dozen times, reaching over and picking it up, examining it, then putting it back down to give the vacuum one more chance.

3. DISCONFECT (dis kon fekt') v. To sterilize the piece of confection (lolly) you dropped on the floor by blowing on it, assuming this will somehow "remove" all the germs.

4. ELBONICS (el bon' iks) n. The actions of two people maneuvering for one armrest in a movie theater.

5. FRUST (frust) n. The small line of debris that refuses to be swept onto the dust pan and keeps backing a person across the room until he finally decides to give up and sweep it under the rug.

6. LACTOMANGULATION (lak' to man gyu lay' shun) n. Manhandling the "open here" spout on a milk container so badly that one has to resort to the "illegal" side.

7. PEPPIER (peph ee ay') n. The waiter at a fancy restaurant whose sole purpose seems to be walking around asking diners if they want fresh ground pepper.

8. PHONESIA (fo nee' zhuh) n. The affliction of dialing a phone number and forgetting whom you were calling just as they answer.

9. PUPKUS (pup' kus) n. The moist residue left on a window after a dog presses its nose to it.

10. TELECRASTINATION (tel e kras tin ay' shun) n. The act of always letting the phone ring at least twice before you pick it up, even when you're only six inches away.

AFMS Newsletter

ITEMS FOR SALE

David Peltz still needs to make room in his garage for lapidary equipment, so he needs to sell some rocks! He has lots of petrified wood, thundereggs, geodes, Petoskey stones, agate rough, etc. He also has some sets of graduated weights (for use on balance scales). Give him a call if you're interested: 616-683-4088.

ROCK AUCTION SEPTEMBER 29

Tom Noe is bringing 15 boxes of rocks to a household auction September 29. The auction will start at 1 p.m., and you might want to talk to the auctioneer (Jim Haines, 633-4044) to find out when he will be getting to the rocks. The address is 1129 Academy Place (from the corner of Angela and Riverside, go north along the river to Academy Place). Note that this is not Tom's home address, so don't show up there. (He'll be at the auction.) There's some good quality agate and jasper, some slabs, small mineral specimens, obsidian, dinosaur bones, petrified wood, some jewelry, pieces from shelf specimens to yard rocks—all sorts of things. It all sells to the highest bidder.

TOURMALINE

By George Judd G.G.

Tourmaline is from the Singhalese word "turamali," meaning "mixed-colored stones," because tourmalines were often confused with other gems.

Tourmaline is one of the most popular of gems among collectors because it is usually inexpensive and occurs in a wide range of colors. The colors are due to a very complex chemical composition.

Chemically, tourmaline is one of the most complex of all the gem minerals. Although it is generally considered a species, there are three major mineralogical types: the alkali, the iron, and the magnesium tourmalines, all of which are complex silicates of boron and aluminum. The differences that distinguish one type from another depend on the additional metallic ions present. The alkali tourmalines, which are of greatest interest gemologically, may contain sodium, lithium and/or potassium; these are usually found in pegmatite dikes. Iron tourmalines are black, and the magnesium type is usually yellow or brown, but it may also be black.

Mineralogists have applied many species names to tourmaline, including elbaite, dravite, schorl, liddicoatite and uvite, to name a few. In addition to these terms, a number of others were used by gemologists and colored-stone dealers, such as indicolite and rubellite. Almost all of these confusing names are gradually being dropped in the jewelry trade. Because tourmaline as a gem is so little known to the lay public, and to many jewelers, such obscure species and variety names tend to mislead and rob the group of needed recognition when sold in jewelry.

RED—The most valuable variety is red to purplish red to violetish red. Pale-pink to dark-red stones are available and in some demand; these are the colors that were once called rubellite. The red variety is best termed red tourmaline. Although rubellite was the best known of the variety names, it adds nothing and has the drawback of creating the impression that it is some kind of ruby imitation. In this age of substitutes, such a term is sure to belittle a natural stone. Red tourmaline is a much more satisfactory name.

GREEN—Included within this variety are stones varying from light green to dark bluish, yellowish or brownish green. They may be very pale or so dark that the color is visible by transmitted light only. The strong dichroism of most green tourmaline is such that the optic-axis direction is almost opaque; by heat treatment, however, the color of some can be improved and the absorption reduced.

BLUE—Pure blue tourmaline is a rare gemstone; it is most frequently a dark violetish or greenish blue. If the intensity of color is sufficient to warrant, it may be fairly expensive, but this variety is more of a curiosity than a commonly encountered gemstone. It is sometimes called indicolit or indigolite.

YELLOW and ORANGE—Pure yellow or orange tourmaline is rarely encountered. More prevalent are light to very dark tones of yellowish brown to brownish yellow, which are like that of sherry topaz and golden beryl.

COLORLESS—Colorless tourmaline, sometimes called achroite (from the Greek, meaning "without color"), has little interest as a gemstone. It is rare in nature.

BLACK—Very rarely, the black variety of tourmaline is used in place of jet or black chalcedony in inexpensive stone-set jewelry. This species is known to mineralogists as schorl.

PARTICOLORED STONES—Tourmaline crystals often show more than one color. Some will be one color at the base, another at the center, and a third near the apex. In others, the interior portion will be one color and the peripheral zone another. When the central portion of the crystal is pink and the periphery green, the combination is referred to as "watermelon" tourmaline.

MODE OF FORMATION

Tourmaline is formed under a variety of conditions, but from the gemological viewpoint the type formed in pegmatite dikes is the most important. However, it is found in a number of other situations, all of which suggest the presence of hot gases and solutions acting under pressure. Like topaz, tourmaline is thought of as a pneumatolytic mineral tor this reason; that is, one that results from the actions of hot gases and/or solutions, either in the late stages of cooling and crystallization of a magma or by the action on earlier-formed rocks of gases or solutions emanating from magrnas.

In recent years, the most important source of tourmaline has been the rich pegmatite dikes of Brazil. From this area (mostly in the state of Minas Gerais) comes fine material in a wide variety of colors.

Recently, California has once again become a significant producer of tourmaline. The famous old Himalaya Mine, at Mesa Grande, has been reopened and is beginning to produce some magnificent material.

Mount Mica deposit, near Paris, Maine, produced some of the world's most beautiful tourmaline. Production during the last five decades, however, has been negligible.

There are a number of other sources of gem tourmaline, significant among which are Madagascar, Ceylon, Burma and Russia.

excerpted from *The Rockpile* (Apr., 2002)

NAME THAT NATURAL RESOURCE
(answers upside down below)

1. I am made of silica and am very porous. I form from volcanic eruptions and am so light I can float in water. I'm ground up and used in abrasive cleaners, soaps, and polishes. I am also excellent for fireproofing and heat insulation. What am I?
2. I am a very soft mineral and rich in magnesium and silica. I have a soapy feel and I am often green. I am used in baby powder and lipstick. What am I?
3. I come in many colors. Although I have a cubic crystal structure, I tend to break in octahedrons. My name stems from the Latin word "fluere" meaning "to flow" in reference to my low melting point and use as a flux in the smelting of metals. It might not surprise you that I have weak fluorescence. What am I?
4. I am a hydrocarbon that exists as a gas or vapor at ordinary pressures and temperatures. There are many types of me, but methane is most important. I am used to make energy for people. What am I?
5. I am hydrous calcium sulfate. I am a soft mineral used in wallboard and plaster in the construction industry. While you might find me in your walls, would you have ever guessed that I am also used as an additive to cake mixes, breads and rolls? What am I?
6. I am a soft mineral with a distinct yellow color. Some people say I smell like rotten eggs, but nonetheless I am used to make rubber, matches, paper and photographs, and I am also used in soaps and detergents. What am I?
7. I am made of calcium carbonate and can be white, clear, yellow, pink or blue. I am used in toothpaste, vinyl, chalk, glass, fiberglass and as a coating on many chewing gums. What am I?
8. I am a soft aluminum silicate clay mineral. I tend to absorb moisture and provide resistance to oil from the skin. This is why I am the main ingredient for face masks used for deep cleaning. What am I?

Adapted from *Earth Science Week* "Ideas and Activities," published by The American Geological Institute.

Answers
1. Pumice 2. Talc 3. Fluorite 4. Natural Gas
5. Gypsum 6. Sulfur 7. Calcite 8. Kaolinite

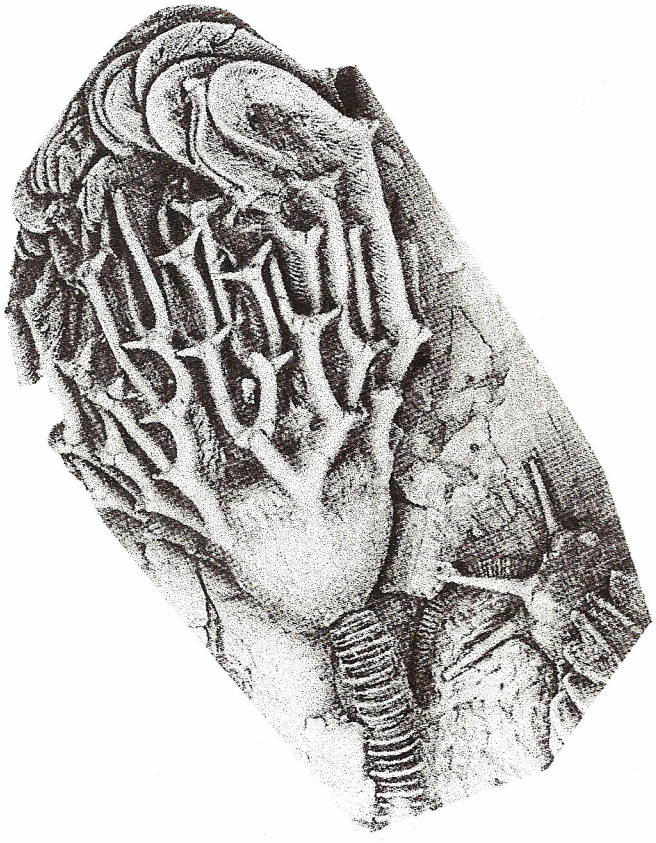
FOSSIL BONE EXHIBIT IN DES MOINES

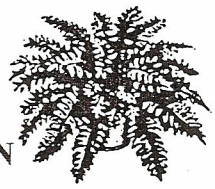
Dinosaur bones representing the lifetime work by noted paleontologist Xaviar Breath, will be exhibited in Des Moines shortly after April 1. The collection is unique in that it consists of only the front leg bones of dinosaurs. This humerus collection features bones from the largest Brontosaurids to the smallest Mousesaurids.

Breath is widely known as an expert on the beach dinosaurs of Hawaii. He has discovered several type specimens and has written a book about Hawaiian dinosaurs. He has published a controversial extinction theory based on his research. Breath has documented a trilateral correlation between the shape of the fossil legs he has pulled on the beach, the abundance of millerlite on the beach and Hawaiian sunshine cycles. Breath notes that animals which were not exposed to millerlite and sunshine on the beach escaped extinction. While Breath refers to his extinction theory as "punctured paradise," critics have labeled his work as the "sittin' on the dock of the bay" theory of extinction. Breath has also been criticized for his "bad jeans" theory of evolution.

No author

Cedar Valley Gems (Apr., 2001)





WORLD'S OLDEST FOSSIL FERN

A small piece of black rock which bore the tag "unknown fossil plant" at the Queensland Museum for 10 years has been catapulted into the spotlight.

The 375-million-year-old specimen has been confirmed as the world's oldest fossil fern, predating all others known by 20 million years. To put that into perspective, that's 150 million years before dinosaurs and 40 million years after the first land plants appeared.

The fern, of which only an 8 cm. stem section remains, was found in a dried-up creek bed, among limestones, near Charters Towers in north Queensland. Queensland paleontologist Alex Cook, who found the fern in 1989, said it was one of the great discoveries of the past 50 years, although "to look at, it's not much."

"It's like having the Red Baron's propeller or Julius Caesar's sword," he said. "I was actually looking for fossil sponges and corals when I saw this unusual stone. It had funny looking circular marks, so I knew it was a fossil wood of some sort, and thought it was significant enough to keep and put away until someone could work out what it was."

Professor Clifford, a botanist specializing in fossils at the museum, uncovered its true origins after consulting scientific literature.

Dr. Cook said the fern would have only been about 25 cm. across and 15 cm. high and had small stems compared to its modern cousins. "We believe the fern was a cushion-like plant, so it's not a tree fern or anything sort of large you'd find in your garden... it sort of looked like a funny looking moss with sprouts coming out of it. Now, each of these shoots was about two to five millimeters across, so it wasn't the hugest fern known to man, but it's still important nonetheless."

"The fern is associated with the world's first forest plants, which were just developing. It was a pretty barren looking landscape and the first insects were about to appear. There were a few pretty crummy looking amphibians, but plenty of fish in the water."

Queensland Courier Mail, no date given

FEW WORDS FROM THE PREZ

By Steve Weinberger, AFMS President

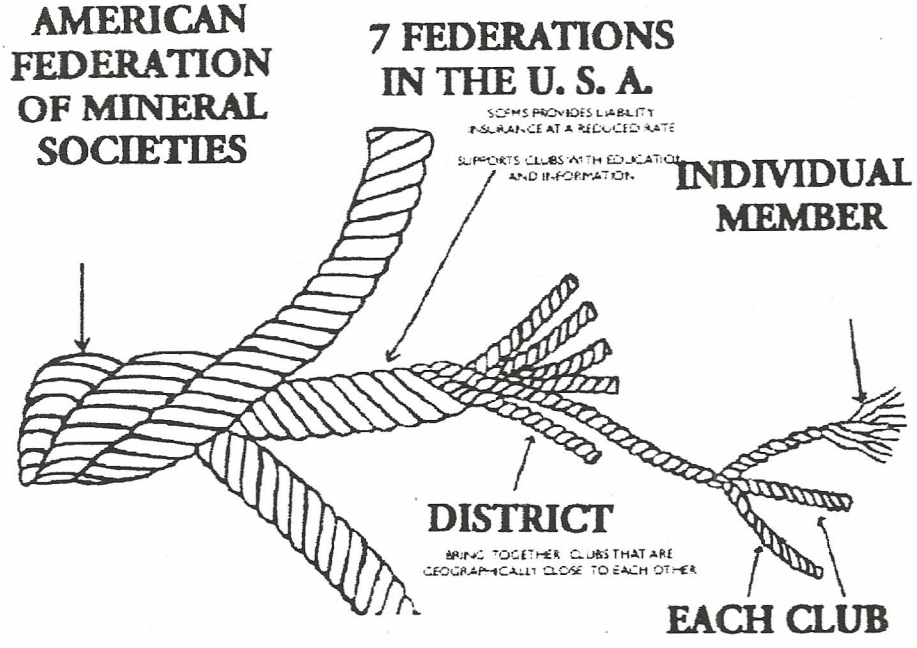
Take a look at the rope diagram below. It expresses the interrelationships between the AFMS, regional federations, districts (areas, regions, states, etc.), clubs and individual members. The drawing shows that the basic and forming strand is the club member. He or she is the one who makes things happen in the hobby.

The intertwining as you progress through the thicker strands shows the support mechanisms in place to provide such services as insurances, contest help, advice, information, materials and recognition of members.

If you picture this now as a communications cable, such as a telephone line, you can see that the flow of information goes both ways. The ultimate goal is to provide as much information as possible to the individual clubs and their members.

FEDERATION NEWS

The 2002 Midwest Federation convention will be in Springfield, Illinois, on October 4-6. At the show, a presentation will be made by the AFMS Scholarship Foundation to Dr. Davis Hess, who will in turn select two graduate students to receive $2,000 in grants per year for two years, for a total of $4,000. Their major must be in any of the earth sciences. Since 1964, the AFMS Scholarship Foundation has made cumulative grants of over one million dollars and hopes to continue.



*The diagram is the creation of Dale Miller, South Central Federation District 1 Vice President and member of the Arlington Gem & Mineral Club.