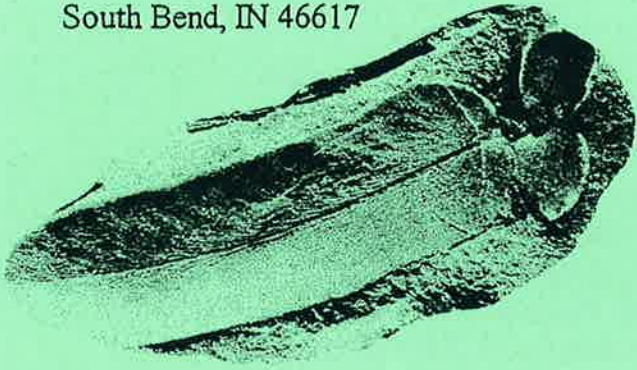


# THE ROCKFINDER

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



# THE ROCKFINDER

SEPTEMBER, 2001

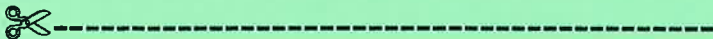
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The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary knowledge and techniques.

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.



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Signed \_\_\_\_\_ Date \_\_\_\_\_

# THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

Volume 41, Number 7

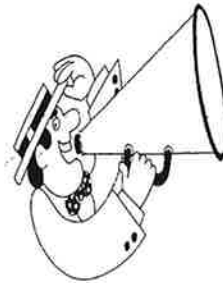
September, 2001

**Meeting:** Sunday, September 23<sup>rd</sup>  
Doors open 1:30 p.m.  
Meeting at 2:00 p.m.  
Guests are always welcome.

**Place:** Our Redeemer Lutheran Church  
805 S. 29<sup>th</sup> St. (29<sup>th</sup> & Wall)  
South Bend, IN

**Program:** Mitsi Weber will present a program  
on stringing beads into necklaces.  
Kits will be available.

**Hosts:** Bill Nelson & Emily Johnson

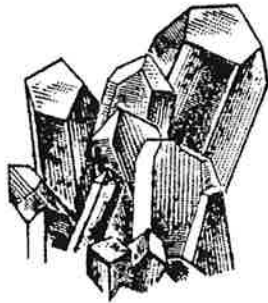


## October Birthdays

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

## Anniversaries

11 Bob & Kathy Miller  
24 William Clark  
27 Louis & Lorraine Jordan  
30 Leo & Elma Heynssens



## UP AND COMING

**Oct. 7: Club field trip to collect Mazon Creek fossils.**

Oct. 12-14: Greater Detroit Gem & Mineral Show, Michigan Mineralogical Society show, South Macomb Community College, Warren, MI.

Oct. 19-21: Three Rivers 40th Annual show, Allen County Fairgrounds, Fort Wayne, IN.

Oct. 20-21: Flint Rock club show, Carter Middle School, Clio, MI.

Oct. 20-21: Blackhawk Gem & Mineral Club show, IBEW Training Center, Moline, IL.

Oct. 20-21: South Suburban (Chicago) Earth Science Club show, Prairie State College, Chicago Heights, IL.

Oct. 26-28: Central Michigan Lapidary Society show, Marshall Street Armory, Lansing, MI.

Oct. 27-28: Akron club show, Emido Expo Center, Cuyahoga Falls, OH.

Oct. 27-28: Evansville Lapidary Society annual show, Washington Square Mall, Evansville, IN.

Nov. 2-4: Southeast Federation show, Mississippi.

Nov. 10-11: Licking County club show, Teheran Grotto, Newark, OH.

**DID YOU KNOW—?**

By Regina Al-Rebiee

Did you know that mercury is the only metal that is liquid at room temperature? You probably already knew that, but did you know that it occurs naturally in the environment? Because of its high density and high surface tension, it is able to form minute spheres in the pores of specific rocks. It is unique in that it has no crystal system, nor does it have a cleavage, fracture, streak or hardness. This type of mercury is the native, or elemental mercury, with the chemical symbol of Hg.

Mercury, also known as quicksilver, can be found in combination with other elements that form compounds. These compounds have had a multitude of applications in medicine, detonators and fungicides, to name just a few. How do we mine mercury, though? Do we extract the liquid spheres from rock pores? I recently found the answer when I was doing some research on a beautiful red Chinese vase I acquired. I wanted to find out why it was called a "cinnabar" vase. Due to the vase's intricate carving, I thought it was carved from a cinnabar tree. Boy, was I mistaken and somewhat embarrassed. As I read an internet article entitled "Asian Art" posted by Sandra Andacht, I learned that the vase is made by applying anywhere from 30 to 200 coats of red lacquer. The lacquer is made from the sap of the tree *Rhus vernicifera*, found in the Far East (I knew there was a tree involved there somewhere). After the lacquer dries, it is carved, and before you stands an extraordinary work of art.

As most of you probably know, cinnabar is the name of a mineral, quite attractive with its scarlet red/cinnamon crystal appearance. Twinning in cinnabar is a distinctive feature while well-shaped crystals are not common. It usually appears as a crust atop a rock and can be found in areas of recent volcanic activity in places such as Spain, China and the United States.

During the time of the Roman Empire, cinnabar was mined quite extensively for, guess what? Mercury. Mercuric sulfide, with its chemical symbol HgS, is the ore of mercury and is used to

make the bright red pigment vermilion, which is used in oriental lacquer wares. A small percentage of mercury is obtained as a byproduct of gold mining, but the majority is obtained from cinnabar mining. The cinnabar is heated in a flow of air. When the sulfur in the ore combines with the oxygen in the air, sulfur dioxide (SO<sub>2</sub>) gas is formed, leaving pure mercury. Unfortunately the sulfur dioxide gas contributes heavily to our acid rain problem, although refiners may be reducing those emissions due to government regulations

Mercury has been found in an Egyptian tomb dating back to about 1500 BC. Its characteristic of watery silver allured medieval alchemists who used it. So alluring for others, Emperor Chia Ching of the Ming Dynasty used it as a potion for longevity and died from its toxicity. Ivan the Terrible probably was so terrible because he faithfully took a medicine for his chronic arthritis which contained mercury, and it is known that ingestion of mercury causes violent mood swings. Historically, cinnabar has had an important role in medicine, religion and art, mainly in Europe and the Far East.

Mercury in any form is toxic to living organisms. It can be easily absorbed through the skin, inhaled as vapor or dust, or ingested by eating a contaminated source. It damages the central nervous system in humans and has been found in fish and grain throughout the world. In Alaska, investigations are ongoing regarding environmental contamination around areas rich in cinnabar as well as naturally occurring mercury. Sediment, water and aquatic life in the vicinity of many of the cinnabar/mercury deposits and mines are heavily contaminated. It is such a shame that a mineral with such beauty and such a multitude of uses is so deadly. To make a long story short, I got my answer to why my red Chinese vase is called "cinnabar."

*Arrowhead News* (no date available)

## MINUTES OF THE AUGUST 19 MEETING, HELD AT THE ANNUAL PICNIC

After a most enjoyable picnic in Pam Rubenstein's beautifully landscaped yard, club president Don Church, not without some difficulty among the happily chatting members, called the meeting to order at 2:00 p.m. Thirty well-fed members were present.

Members were asked to volunteer for various jobs at the MGM Labor Day show at Century Center from Thursday evening, August 30, to Sunday evening, September 2. Kathy Miller circulated a sign-up sheet for taking care of the door. Margaret Heinek requested volunteers for taking charge of the Kiddie Komer. Help is needed for set-up at 6:00 p.m. Thursday and 8:00 a.m. Friday, and clean-up at 4:00 p.m. on Sunday.

Margaret handed out printed notices about the show to the members. David Peltz moved that the club reimburse Margaret for supplies used in publicizing the show. Emily Johnson seconded the motion, which carried unanimously.

Members had sewed 200 cloth bags to be filled with rocks and fossils and handed out to the children who attend the show. All who were present helped fill the bags with rocks and fossils which had been donated by the members. After some discussion it was decided to sell the bags rather than give them away.

The next topic of discussion was the Mazon Creek field trip planned for October 7. There are 12 spaces open on the bus. They will be available until the September meeting.

Sam Shapiro brought eight rose of sharon bushes to give to anyone who wanted one.

Pam Rubenstein was thanked for hosting the picnic this year. The meeting adjourned at 2:30 p.m.

Respectfully submitted,  
M. Jeanne Finske, CSC, Secretary



## A SUMMER LETTER FROM GORDON DOBECKI

Dear Margaret & Bob,

I hope everyone in the club is doing well and out hunting rocks this summer. I just got back from a trip to Spain, where I didn't do any collecting but had lots of fun nevertheless. Since I figured that this would be my last trip to Europe, I decided to splurge. Before leaving I booked rooms in the Spanish government's chain of four-star hotels called Paradors. These are all historic palaces, castles, convents and monasteries that have been restored and outfitted with all the modern conveniences. Many were the main tourist attractions in the towns in which they are located. The oldest one dated back to the eighth century. The most outstanding feature of these accommodations was the bathroom. Many were floor to ceiling in beautiful polished marble. To reproduce these baths in the U.S. would probably cost \$20,000 just for the tile work.

Where new sidewalks were being constructed, instead of poured concrete they used large slabs of granite. This all goes back to Roman times, when things were built to last & done with artistic flair. The museum in Cordoba had a section of pavement from the Roman forum. The intricate lapidary work was hard to believe. They had large marble slabs with holes as big as 1 foot in diameter drilled and then inlaid with a contrasting color. They also used many different jaspers, agates, onyxes, etc., in intricate geometric patterns.

I visited the Roman ruins at Italica outside Seville and Merida, which has an outstanding museum. The mosaics on display were fantastic. Just accumulating enough rock pieces of the right color, shape and thickness would be mind-boggling for just one room. Yet every room of every house had these mosaics with no two alike. Just repairing these mosaics is so time-consuming and strenuous that few Spaniards have taken up the occupation.

The Spanish people are very friendly and very helpful, not at all like the French. I bet I was lost at least 15 times, but got the help to find my way every time with the first person I asked. If anyone in the club is contemplating a trip to Europe, Spain will not disappoint.

Gordon

## WHY GOLD DISCOLORS

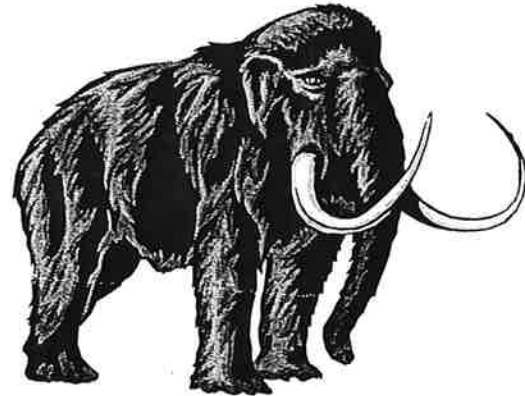
The most common reason gold turns different colors is a chemical reaction with the alloyed metals mixed with the gold when it is exposed to a caustic element. Some of these caustic elements are present in common household products. Swimming pool chlorides and Clorox-based household cleaners will definitely cause gold to change to an ugly gray. Mercury from a broken thermometer can literally leave a black spot or hole. Copier ribbons contain xylem, which can cause yellow gold to turn white, and some ink stamp pads contain a medium which will do the same thing. Smog fumes, perspiration, saltwater or even certain fruit juices can all cause a discoloring effect on gold. Whenever you are going swimming in chlorinated water or will be working with solvents or cleaners, it is best to remove your jewelry. If you get any of these chemicals on your jewelry, clean it with a mild solution of baking soda and rinse well before wearing them again, or take them to your local jeweler for a professional cleaning.

The most common reason gold will discolor your skin is metallic abrasion. Many cosmetics contain compounds harder than the jewelry itself. These compounds in the cosmetics will wear away microscopic particles of gold, which will collect in the pores of your skin. Very fine metal particles always appear black, not metallic. When they stick to your skin in quantities they will form a black smudge. To prevent this you should remove your jewelry when applying cosmetics, then carefully clean the area so that it is free of any cosmetics where the jewelry is to be worn. Changing cosmetics brands may also help.

Gold itself will not corrode, but the primary alloys that are mixed with 10 and 14 karat gold will. They are copper and silver. Under moist conditions, a person's perspiration (which contains fats and fatty acids) can cause corrosion in gold jewelry. The level of corrosion will differ, based upon each individual's unique body chemistry. Things that you can do to prevent your jewelry from tarnishing or turning black are to remove all jewelry before using soaps, perfumes or cosmetics, and have your jewelry cleaned frequently. You will be amazed at how nice it will look when kept free of oils and dirt. Eighteen-karat gold jewelry is less likely to change because of the

lower alloy content, and platinum jewelry is nearly impervious to chemical corrosion. Of all the different types of jewelry, it will wear the best and give you the least amount of trouble, especially if you experience constant problems with discoloration and black smudges.

From Thomas, posted on *Orchid Digest*



## THE DIFFERENCES BETWEEN MAMMOTHS AND MASTODONS

1. Mammoths and mastodons represent different lines of development among the prosimians, or elephant-like mammals. (The origin of mastodons goes back about 25 million years; mammoths are first known from about 7 million years ago.)
2. Of the two, mammoths are closer to the two living species—the African and Asian elephants. Mammoths, together with the living species, are called true elephants.
3. The main difference between the two groups lies in the structure of their molars or cheek teeth. Both have “outsized molars,” but mastodons’ teeth are low-crowned. (The crown is the part of the tooth that grows out of the gum line.) Mastodon molars have rounded cusps separated by valleys. Mammoth (and living elephant) molars consist of a series of cement-filled, ridge-like plates.
4. Mastodons and mammoths differed in diet and habitat. The low-crowned mastodon teeth were an adaptation to browsing on the relatively soft twigs and leaves of open woodland. The cement-hardened high-crowned mammoth molars are efficient mills for grinding up tough prairie grasses. Of the two, the mammoth could exploit a wider range of habitat.

*The Trilobite* (Nov., 2000)

## THE ORIGIN AND HISTORY OF THE WORLD'S MOST COSTLY AGATE

By Herb Luckert

In 278 BCE Ptolemy II married his sister Arsinoe II (nothing personal—business is business). At or near that date a large cameo of the couple was carved in agate. It was about 5 inches by 5 inches but only 9 mm. thick at its thickest point. Within that 9 mm. there were 17 color layers. The carving was done with wondrous technique, not only utilizing the colors of the layers to color the subject, but by carving more or less deeply in the translucent areas to allow more or less of the underlying layer's color to shine through.

The stone remained in Alexandria until 31 BCE when Octavian beat up on Marc Antony and Cleopatra and took the imperial Egyptian jewel box with him back to Italy, the cameo presumably inside.

We know nothing of the cameo until the construction of a solid gold shrine said to house relics of the three wise men. The relics were given by the empress Helen to a priest named Eustorgius. He became bishop of Milan in 343. The relics remained in Milan until 1164 when Holy Roman Emperor Frederick I (Friedrich Barbarossa) plundered much of Milan and presumably carted off the cameo as well as the relics to Cologne.

Once in Cologne, the relics became important as a political tool. The crusades had not been going well and it was dangerous to make a pilgrimage to the Holy Land. The emperor could now cover this weakness with the plunder from Italy. A large, solid gold shrine was built (in the waning years of the 12<sup>th</sup> century) to house the relics and serve as a pilgrim destination right in Cologne. No need to travel so far! The shrine was adorned with various stones. The centerpiece was our long lost cameo.

In 1229 the famous Dominican friar, Albertus Magnus, saint, teacher of Thomas Aquinas and later bishop of Regensburg, visited Cologne and examined the shrine and the cameo. In 1250 he wrote a book on minerals and included a description of the cameo and his comments on its origin. Al says that the stone was so marvelously made that it could not be the work of

man. It must, therefore, be a found object, the work of God. He said that such finds were not uncommon, although he acknowledged that men sometimes attempt similar productions by carving stones. Nevertheless, he attempted a scientific explanation of how God may have caused this wonderful object to be made.

He even offered two explanations. The first covers the origin of "onyx," a term he uses for any



The onyx tree. From *Hortus Sanitatis*(1497)

banded stone. It seems that onyx forms from the rubbery drippings of the onyx tree, accumulating in layers of differing colors and later petrifying. (Sort of like amber except for the layers of colors.) Another possibility that Al speculates on is that onyx forms from earth and moisture (remember, everything is made of earth, air, fire and water), both in liquid form. Then, under the influence of the proper alignment of the stars and planets, it hardens into "onyx." (Both of these speculations seem to be about as valid as those of various modern theories for the formation of agate.)

After the hardening of the onyx into stone, a particularly powerful alignment of the stars and planets can turn the stone into representations of people and animals. He says this is especially common with onyx.

The cameo itself managed to survive these speculations until its disappearance in 1574. Someone pried it loose from its gold mounting and it was never seen in Cologne again. Its theft created quite a stir, even to the point of sealing of the city gates for 12 days while a house to house search was made. Two shady characters were arrested but later released for lack of evidence. It was at this time that a value was placed on the stone. The city said the stone was valued at two tons of gold. (At least, that's what they told the insurance company, I suppose.)

In 1586 a collector in Rome was offered the piece by a Flemish dealer for 500 gold coins. The

collector described the stone as picturing Alexander the Great and Olympia, his mother. He tried to buy the stone for less than the asking price but the dealer took it to the Duke of Mantua the following year and sold it there, price unknown.

Evidently the stone didn't like staying in Italy too long after becoming accustomed to life in Germany. In 1630 Albert of Saxony, leading troops of the Holy Roman Emperor, overran Mantua and it fell into German hands again. Upon reaching home, he decided to present it to the Empress Anna Eleonora Gonzaga, second wife of the Emperor Ferdinand II in Vienna. The cameo has remained in Vienna since that time and can now be seen in the Museum of Art History in that city (unless there has been a recent agate theft there).

Ref: extraLapis No. 19; *The Encyclopedia of the Middle Ages*

### **LIVING FOSSILS**—The Learning Kingdom's Cool Fact of the Day for February 8, 2001

Some kinds of life called “living fossils” have survived virtually unchanged for millions of years. There's a primitive fish called the coelacanth, for example, that has not changed much in 400 million years. Before the first amphibians pulled themselves onto dry land, coelacanths were already living in the ocean.

But the oldest living fossils of all come from a much, much earlier time. They are tiny bacteria-like organisms called archaea. When life first began more than three billion years ago, the archaea were among the most successful early forms.

In those days, archaea and similar organisms were the only kind of life there was. Many of them lived in places where the water was hot or loaded with chemicals, and that is where they are still found today, living in undersea vent zones, mineral pools and hot springs around the world.

More about archaea:

[www.ucmp.berkeley.edu/archaea/archaea.html](http://www.ucmp.berkeley.edu/archaea/archaea.html)

[www.ultranet.com/~jkimball/BiologyPages/A/Archaea.html](http://www.ultranet.com/~jkimball/BiologyPages/A/Archaea.html)

To subscribe (new Learning Kingdom subscribers only), visit <http://lists.LearningKingdom.com/join/>.

### **THE FLYING PTEROSAUR**

By Marie Zigler

Did you know that some pterosaurs found in Big Bend National Park in Texas had wing spans up to 39 feet across? Wow! That really sparked my interest in dinosaurs.

For this article, I chose a good reference book to look at closely. I would recommend *The Illustrated Encyclopedia of Dinosaurs* by Dr. David Norman as excellent; it is also well illustrated. I narrowed my choice of dinosaurs to study to the flying kind, though I later learned through my reading that pterosaurs were relatives of dinosaurs and not true dinosaurs.

The pterosaurs (Greek “pter” meaning wing, and “sauros” meaning lizard) lived during the Mesozoic Era—the Triassic, Jurassic and Cretaceous Periods. Fossils have been found on all the continents except Antarctica. There are around 60 genera. Pterosaurs are of the order Pterosauria. To allow this animal to fly or glide, their bodies needed to be light. Their wings, similar to those of a bat, were thin membranes of skin, and were attached to a very long fourth digit on each arm. There was a long-tailed group and a short-tailed group that lived during the Jurassic.

Well-preserved fossils have been found mostly in marine deposits, causing some scientists to think that they lived close to the water, as many sea birds do today. One, named *Rhamphorhynchus* because of its strong shoulder girdle, is thought to have been a very excellent flier; it had long pointed teeth and may have been able to skim under the water, to catch fish. It is the best known genus of the late Triassic Period. There were pterosaurs that lived in the interior, but not many fossils of pterosaurs have been found inland.

It took detailed study by paleontologists and many finds on the world globe to learn about these flying creatures. The scientists' contributions of past centuries laid the foundation of today's paleontology. Let's take a look at some of the men in this field of study who contributed to our understanding of this



dinosaur-relative that lived so many millions of years go.

In Germany a well-preserved fossil of a flying dinosaur was found by Cosmo Alessandro Collini in 1784. His impression was that it was an aquatic creature. In the early nineteenth century, Georges Cuvier, seeing that the fourth finger was very elongated, suggested that it supported a wing and he named the fossil Pterodactylus (wing finger). Another scientist thought it was a swimmer and made a restoration of it as a penguin. Herbert von Meyer in 1837 saw that the bones had openings for air passage, meaning that their skeletons were lightened for flight. Casts made from skulls in England in the late 1800s showed that pterosaur probably had birdlike intelligence.

Professor Harry Govier in 1901, in *Dragons of the Air*, came to the conclusion that pterosaurs were very specialized creatures with the ability to fly, that they had large brains and complex lungs, and they could maintain a high activity level. He thought that they were warm-blooded and must have had some kind of insulation of fur or feathers.

In 1970 A.G. Sharov (Moscow) collected several remarkably preserved fossils that showed fine impressions of a furry covering. (When Bob and I were at the Drumheller Fossil Museum in Alberta, Canada, last year we saw some of the recent pterosaur fossils finds from China that showed markings that were featherlike.)

In North America in 1870, O.C. Marsh and Buffalo Bill Cody went on an expedition into the Rockies that was funded by Yale. They discovered the first remains of pterosaur fossils on this continent. Some had wing spans of up to 23 feet. Marsh named them Pterodactylus after the European type. His arch-rival in fossil discovery was Edward Cope, who also found pterosaur fossils. Cope chose the name Ornithochirus (bird arm). Later Marsh proposed a new name for this creature, Pteranodon, which meant winged and toothless. This after he found a fossil that had a long pointed beak without teeth and a very long pointed crest on the back of the skull. It had a very long wing span.

In 1972 Douglass Lawson from California found an ultralong specimen with a wing span of 50 feet. It has been named Quetzalcoatlus after an Aztec god.

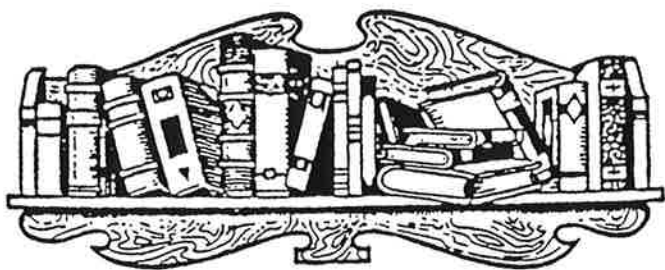
Today the paleontologists are taking a fresh look at the pterosaurs. There are still many questions and much to learn. Some scientists think they could not only glide but that they flew very strongly as well. Others wonder, did they have fur or feathers or only skin like bats? Could they only toddle awkwardly along on their short legs or could they run very fast with their tail sticking straight out to give them balance? I look forward to learning how tomorrow's scientists will determine answers to these questions.

References: *The Illustrated Encyclopedia of Dinosaurs* by Dr. David Norman and Microsoft Encarta  
*The Strata Data* (Jan., 2001)

## HOW THEY DID IT IN THE OLDEN DAYS

The first lapidary "how to do it" was written in 11 AD by Theophilus. In it, he describes the cutting and polishing of stones as practiced in India. Rock crystal was first cut into pieces with an iron saw that was charged with slurry of sand and water. It was then cemented to a stick and smoothed by rubbing it on fixed wet sandstone of increasingly finer texture. It was then polished with moistened brick dust on a slab of lead. Powdered rock crystal was used in cutting and polishing emeralds, jasper, beryl, onyx and other gemstones of that time.

M.G.A.G.S. (spring, 2001)



## FOR FURTHER READING

*Science News* reported recently that scientists who name their fossil discoveries may use the occasion to display their sense of humor. Among the Latinate names noted were: *Aegrotocatellus* (a trilobite, “sick puppy”), *Eucritta melanolimnetes* (a fossil amphibian, “creature from the black lagoon”), *Chloridops regiskongi* (an extinct finch, “King Kong”), *Arfia* (fossil hyaenodont, resembling a dog), and *Cuttysarkus estes* (a fossil lizard, probably not named for the ship of that name).

*Science News* (May 26, 2001)

The hoopla surrounding National Geographic Society’s announcement of a missing link (bird/dinosaur) fossil faded after the fossil was proven to be a fake. (Whoops.) However, continued study of the fossil, which had been assembled from fossils from up to five different animals, shows that at least two of the animals are new discoveries, completely unknown earlier.

*Science News* (Apr. 21, 2001)

While bulldozing ground to begin developing an industrial park, Sheldon Johnson of St. George, Utah, struck footprints—dinosaur footprints, and a lot of them. The tracks range from five to 18 inches in length and there are hundreds of them. The Johnsons have opened the 50-acre site to tourists, and volunteers now operate it seven days a week for the thousands of tourists who have shown up.

*Science News* (June 23, 2001)

## ROBINSON JEFFERS (1881—1962): POETRY AND GEOLOGY

By Sam Shapiro

Robinson Jeffers, one of America’s greatest 20th-century poets, was born in Pittsburgh, the son of a college professor. As a child, he was sent to boarding schools in Zurich, Lucerne, Leipzig and Lausanne, where he received an excellent classical education. Returning to the U.S., he studied medicine at the University of California and forestry at the University of Washington. Legacies made him financially independent, and in 1914 he moved to the beautiful mountain coast at Carmel, California. Here, with his own hands, he built a stone tower (limestone? granite? greywacke?) where he lived until his death at age 75.

“To the Stone-cutters” is about geology and poetry. Jeffers argues that both poets and stone-cutters are trying to defy time and mortality. They will inevitably fail, but in a heroic and human way.

### To the Stone-Cutters

By Robinson Jeffers

Stone-cutters fighting time with marble, you foredefeated  
Challengers of oblivion  
Eat cynical earnings, knowing rock splits, records fall down,  
The square-limbed Roman letters  
Scale in the thaws, wear in the rain. The poet as well  
Builds his monument mockingly;  
For man will be blotted out, the blithe earth die, the brave sun  
Die blind and blacken to the heart:  
Yet stones have stood for a thousand years, and pained thoughts found  
The honey of peace in old poems.