

The Rockfinder

Michiana Gem & Mineral Society

Tom Noe, Editor

305 Napoleon Blvd.

South Bend, IN 46617



OCTOBER 1996



THE ROCKFINDER

HIGHLIGHTS IN THIS ISSUE:

Using Acid To Clean Minerals

Interesting Mining Facts

Diamonds in Wyoming?

Field Trip Roundup



MICHIANA GEM & MINERAL SOCIETY

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Field Trips	Kathy Miller	1106 Clayton Drive, South Bend, IN 46554

THE PURPOSE of the Michiana Gem & Mineral Society is to promote interest in and study of the earth sciences and the lapidary arts, and the sharing of 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. Exceptions include field trip meetings, June (field trip), July (no meeting), August (club picnic) and December (Christmas Party).

Board meetings are held the second Wednesday of each month, 7:00 pm, St. Joseph County Public Library, basement level.

The annual club show is Labor Day Weekend.

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.

Rockfinder staff:

Editor, Tom Noe, 305 Napoleon Blvd., South Bend, IN 46617
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Reporters, Bob Heinek, Herb Luckert, club members
 All contributions for publication should be in the hands of the editor by the 10th of each month. Call (219) 289-2028 or (219) 654-3673. Permission is hereby granted to reprint any original *Rockfinder* articles, as long as due recognition is given along with the reprint.

cut _____

Yearly Membership Dues (Payable before January 1)

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

Please send your dues and this form to
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 c/o Margaret Heinek
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Please make address corrections to the mailing label (reverse side) and/or fill in the optional information below.

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| Carving _____ | Micromounts _____ |
| | Other _____ |

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THE ROCKFINDER

VOLUME 36
NUMBER 10

OCTOBER, 1996

Published by:
Michiana Gem & Mineral Society

Meeting: Meeting: Sunday, October 20, 1996
Doors Open 1:30 PM
Meeting at 2:00 PM

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

Hosts: Lorraine Jordan and Mike Slattery

Program: Wire-wrapping video

RECENT AWARDS

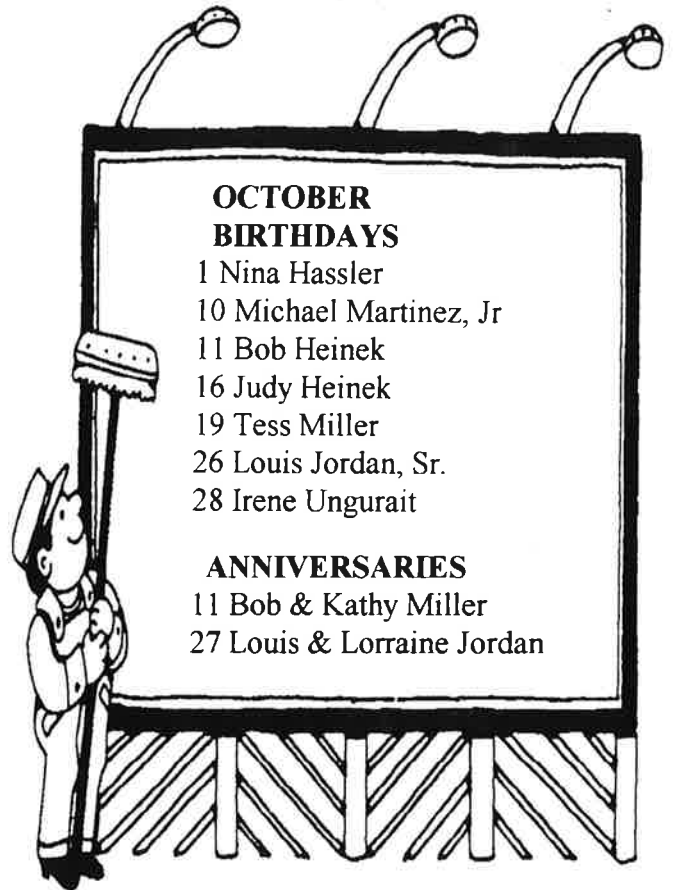
At the Midwest Federation Convention in Macomb, Illinois, on July 28, awards were announced in various categories relating to club bulletins.

The eighth place award for an original adult article went to Paul Godollei for his article "Granite." Paul was a member of the club and a prolific writer until his death last year.

The sixth-place award for small newsletters went to *The Rockfinder*, so congratulations to Tom Noe, Margaret Heinek, Bob Heinek, Herb Luckert, Emily Johnson and all those who contributed to *The Rockfinder* over the past year.

UP AND COMING

October 25-27: Central Michigan Show. Lansing, MI. Armory
October 26: Fabulous Fossil Festival, Indiana State Museum, 317-466-2288



MARGARET'S COLUMN

Wasn't the weekend trip to Ohio a good one? I know I enjoyed it. I am so happy that so many nice fossils were found, and sincerely hope all will bring some of them to our meeting on October 20th to "show & tell"

Special thanks go to Bonnie and Kathy for all of their efforts in making this an enjoyable/successful trip. The restaurant where we ate on Saturday evening was full of atmosphere and the food was good. Bob and I visited the book store on the main street, found a book on dinosaurs which is very interesting. In all it was a fun weekend. I am looking forward to next year and a possible trip to The Falls of Ohio and their festival.

Also to Matt Brueske for finding the spots to hunt for fossils, and especially for the visit to the excellent museum at the university. It was a very impressive collection of fossils and rocks, even though the curator kept saying it was a "small museum." When I mentioned Bob and I liked petrified wood, and thought the piece of wood they had in a display case was nice, he invited me to see a piece that Matt had gotten for him. When I went to his office, and told him what kind of wood it was, he was glad to identify the species. The colorful wood was from the Petrified Forest, Arizona, and is a piece of "Araucarioxylon."

Remember our meeting this month will be on the 20th, and the nominating committee will present the slate of officers for 1997. It is important that you make your views known, and help in the nominations. This is YOUR club and your ideas are important. The election will be held in November.

We have several new members; some joined at the show in September, some since. Welcome to all!

John & Paula Stanley, Jacob and Benjamin
Lana Wright
Lance & Susan Oakley
Tom Nace
Rebecca Parker
Fiona Jenkins
David and Sally Peltz
Toni Igaz
Susan K Brown



I have had an interesting weekend. In trying to obtain an editor for the American Federation Newsletter, I was at my wits end. Saturday night I contacted a man in California, by phone, to see if he could help me in finding someone to take over the job, he asked if I was on the "net", when I replied "yes", he said there is a group of rockhounds that sends articles and bulletins on the inter-net. He immediately sent an E-mail to about 60 editors, I got a copy of his E-mail, this all took place in about 10 minutes. By Sunday morning I had mail from Maryland offering to do the December edition. Then an editor from Oklahoma wrote, E-mail, offering to do the job. Just think how long it would take "snail-mail" to get to all of these people and back to me. As I said when this happened, "it is mind-boggling to see what is happening in this computer age."

Hope to see a good turnout at the October meeting.

FOR SALE BY CLUB MEMBERS

Large number of mineral specimens (ores, crystals, etc.), microscope, specimens of petrified wood (some polished), micromounts, tumbled stones, finished bola ties and buckles, some cabs and cabbing slabs, large variety of modern seashells, other miscellaneous stones. Call Addie Niebauer at 272-1086.

A porch full of rocks collected over a long period. Many Indiana and Illinois specimens, some Ohio flint, Coal City fossils, geodes (some large), many mineral specimens, a spool polishing unit, jewelry mountings, lots of crystals. Call Bess Wise at 616-683-6920.

FREE TO CLUB MEMBERS

Rough specimens, as dug, from various Western localities. Gold sheen obsidian, thundereggs, a lot of petrified wood, etc. Call Leo Heynssens at 232-5050.

MINUTES OF THE SEPTEMBER 22,
1996, MICHIANA GEM & MINERAL
SOCIETY.

President Heinek opened the meeting at 2:00 P.M. at Our Redeemer Lutheran Church. Fred Kunde and Pat Staykoush were introduced as guests. Welcome to both of them.

A motion was made to accept the minutes as printed in the ROCKFINDER. Phyllis Luckert second the motion. All were in favor.

Pam Rubenstein gave the treasurer's report. No questions were asked so the report will be filed for audit. Pam also gave a show report.

President Heinek asked what people thought about the show and Bill Crull said it was a very nice and an organized show. Member displays were very nice too!

A tentative contract for the next two years was sent to Margaret for the August 29-31, 1997, show and the September 4-6, 1998, by Mark Bradley from Century Center.

A date was chosen for our 1997 picnic which will be August 17th at Clay Park.

HOSTESSES: Margaret Schultz and Dick and Joan Rosback. The treats were very tasty and good.

LIBRARY: Bob Miller gave a report on the library and is trying to get everything in order. You may sign out a book for 2 months at a time.

SUNSHINE: No report.

EDITOR: Tom Noe asked members to write articles about their summer trips for the newsletter.

FIELD TRIPS: Kathy Miller reported on the

upcoming trip this next weekend. Kathy and Bonnie have everything in order so a lot of fun should be had.

Marie Crull gave a delegate's report on the Midwest Federation Show in McComb, IL and thanked everyone for sending her to represent the club.

Vice-President Mike Slattery chose Tom Noe and Tom McLaughlin to help him on the nominating committee for new officers for 1997.

Displays were brought in by Tom Noe, Bob and Margaret Heinek, Tom and Pat McLaughlin and Elma Heynssens.

Our program was on making cabachons. It was very interesting.

Door prizes went to Bob Heinek, Irene Ungurait, Alec Rubenstein, Phyllis Luckert and Leo Heynssens.

26 adults, 1 junior and 2 guests were present.

Respectfully Submitted,
Marie Crull, Secretary

* * * * *

WHAT THE HECK'S A HEXAHEDRON?

Don't let these long crystal names give you trouble, because it is very simple if you will follow, or memorize, a few simple rules. First, I suggest that you break down the word into syllables and leave off the last syllable "hedron," which simply means "face." Now to memorize the five prefixes: Tris--three, Tetra--four, Hexa--six, Octa--eight, Dodeca--twelve.

As an example, take the word tetrahedron. You have "tetra" meaning four, and "hedron" meaning face. So, a tetrahedron is a four-sided figure or crystal. Likewise, hexadron is a six-sided crystal and so on. Simple, isn't it?

Now let's try a word with two prefixes--such as "tetrahexahedron." In this case you simply multiply the first by the second prefix. Ergo--you have a twenty-four sided crystal! via *-Stonechat, Geolap News 2/92*

MGMS AND THE EXCELLENT FOSSIL ADVENTURE

by Tom Noe

A busload of eager fossil collectors descended on the college town of Oxford, Ohio, during the weekend of September 27. Their objective--a few days of vacation on an Ordovician sea bottom. The result--many pounds and even a few boxes full of magnificent fossils, intricately detailed and preserved.

Many thanks to our field trip chair, Kathy Miller, who organized the event, and also to Bonnie Brueske and her son Matt, who is a geology major at Miami University in Oxford. Matt clued us in to some superior collecting sites (back across the border in Indiana).

Were the fossils easy to find? Well, it was impossible not to find them. At the first road cut on Saturday morning (more like a gorge), we had to climb over quadrobillions of fossils as we looked for the nicest ones. It was layer upon layer of compressed brachiopods, gastropods, trilobites, bryozoans, etc., etc. Speaking of trilobites, which were comparatively rare and thus the object of intense searching, several club members found nice examples of the rolled-up *Flexicalymene meeki*: Sr. Jeanne Finske's the largest, then Bob Miller's medium-sized one and Tom Noe's tiny one. Phyllis Luckert found several in various conditions. Sr. Jeanne gets the serendipity prize for finding her trilobite just after stepping off the bus at the first stop--the first find of the weekend and one of the best.

The overall prize goes to Alice Garwood, who found a stupendous trilobite specimen, perfectly preserved with all the ridges in high relief. She discovered this at our last stop, on the causeway road across Brookville Lake. "It was just sitting there in full view." Alice also located a nice long segment of crinoid stem on a matrix slab.

Everyone, though, found plenty to brag about. Both adults and junior members had a great time. The weather cooperated with rain showers that ended just as we were getting set to leave the motel on Saturday morning, and the rest of the weekend was fine, but squishy. Nobody needed a squirt bottle because the fossils were already wet.

Gordon Dobecki led a snipe hunt on



Saturday night and some sightings were reported, but unconfirmed.

These Ordovician fossils are world-famous for their intricate details of preservation, and club members had a great time collecting some.

(Note: check last June's *Rockfinder* for an article on cleaning fossils.)

CLEANING MINERAL SPECIMENS

by John Betts

Many specimens collected in the field do not look like the ones that dealers are selling, so most collectors become discouraged or frustrated. These articles over the next four months will give a few simple techniques for cleaning the pieces you collect.

Oxalic Acid

Anything that has the word "acid" sounds ominous, but oxalic acid is easy to find and use and it is the safest for the home. In fact, it is found in many vegetables, including spinach. It is used to dissolve the iron oxide (brown) stain on all minerals.

To make this as simple as possible, I will give a step-by-step guide to its use. Do not take any shortcuts or make substitutions.

Purchase a one-pound box of oxalic acid (OA) powder at your local hardware store in the paint department or at a paint store. It is used as a wood bleach and will be labeled as such. The most common brand is Rainbow.

Fill a plastic one-gallon container 3/4 full with hot tap water. Pour in the OA crystals and stir for five minutes. Be careful not to inhale any powder when adding the crystals. Once the OA is dissolved, top off the container to a full gallon. Label the container and put it out of reach of children or pets.

When you are ready to use it, place your specimens in a plastic container and add enough

OA solution to cover. Set aside for several days.

After the iron color has disappeared, then you can remove the specimens (with gloves on) and wash under running water for three hours. Then soak in clean water for a day, changing the water as often as possible.

Heat speeds up the reaction, as does agitation. If you have a hot plate and can set it up outdoors or in an area with good ventilation, then repeat step 4 but heat the solution to bath water hot (110° F.) Never boil! You will find that an hour in a hot solution will usually do the trick. Best of all is an ultrasonic cleaner with a built-in heater. Sometimes only 30 minutes is necessary. But you should not put the OA directly into the ultrasonic cleaner's stainless steel basin. Make a double-boiler type of arrangement by partially filling the basin with water. Then place your specimens and the OA solution in a plastic container or heavy-duty plastic bag that is suspended in the water.

You can reuse the solution over and over.

As it dissolves more and more iron, it will get darker, often taking on a green color. After it gets really dark I would discard it and mix a new batch.

Safety is important. The OA solution is highly toxic. It can be absorbed through the skin and builds up in your organs cumulatively. The same goes for the fumes, which is why you never boil the solution and always have proper ventilation when using the heated solution. Be careful not to spill the solution on porcelain and keep away from food preparation surfaces.

In spite of the fuss, this is the best all-around method of cleaning minerals. I keep a large five-gallon bucket with a tight-fitting lid filled and ready, and drop specimens in as I collect them. It always works, and the large volume does not exhaust quickly. Mastering this technique will provide an important tool in your mineral cleaning and preparation arsenal.

(Next month: using muriatic acid)

THIS MONTH'S PUZZLE -- SHAPES OF FACETED STONES
Match the shape to its common name. Good luck!



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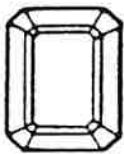
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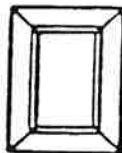
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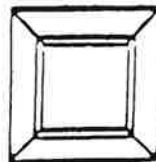
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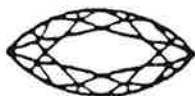
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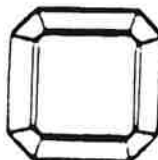
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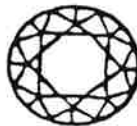
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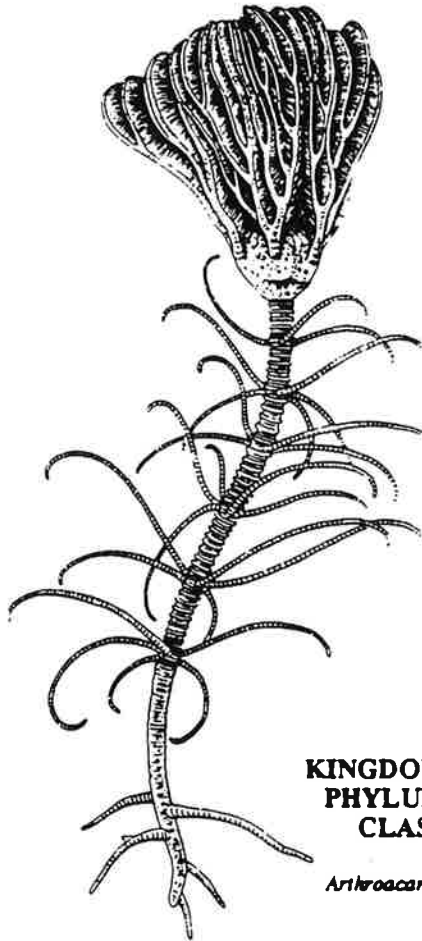


13

- A. Antique
- B. Baguette
- C. Heart
- D. Navette
- E. Octagon
- F. Octagon Square
- G. Oval
- H. Peak Triangle
- I. Pear Shape
- J. Rectangle
- K. Round
- L. Square
- M. Tapered Baguette

From Serendipity Gems (Sept., 1996), puzzle designed by Jack Dare, sketches from Gems & Minerals.

WHAT IS A CRINOID?



KINGDOM: Animalia
PHYLUM: Echinodermata
CLASS: Crinoidea

Artthroacantha punctobrachiata

EXTANT CLASS

The term crinoid refers to an extant (living) class of echinoderms. These animals, commonly known as "sea lilies" and "feather stars", have a long history. They first appear in the fossil record in marine sediments deposited approximately 530 million years ago during the Cambrian Period. Stemmed forms are called sea lilies because of their superficial resemblance to flowers. These stemmed crinoids became abundant in the middle Ordovician Period, 470 million years ago, and flourished in the shallow inland seas of the Paleozoic Era. Though so abundant that many late Paleozoic limestone deposits are composed primarily of crinoid skeletal parts, they nearly became extinct 240 million years ago at the end of the Paleozoic Era. Free-moving stemless varieties, called feather stars, appeared during the Mesozoic Era approximately 200 million years ago.

BLACK HILLS INSTI-
TUTE OF GEOLOGICAL
RESEARCH.

Don't worry about temptation--as you grow older, it starts avoiding you.

-- Old Farmer's Almanac

Diamonds in Wyoming

(from the February issue of *Geotimes*)

More than twenty companies are exploring portions of Wyoming near the Colorado state line for diamonds. That's right, diamonds in Wyoming. Over 100 kimberlite intrusions have been found in this area, and other anomalies that may indicate the presence of diamonds await more detailed study. The senior economic geologist of the Wyoming State Geological Survey, W. Dan House, believes that several diamond mines will be operating in Wyoming within a few years.

PETE LARSON IMPRISONED

Peter L. Larson of the Black Hills Institute, involved in the "Sue" fiasco surrendered to federal authorities and began serving a two-year prison term in Colorado.

Peter was convicted of two felonies--failure to report to American customs officials \$31,700 in travelers checks he had brought from Japan, and failure to report \$15,000 in cash he took to Peru.

"Sue" has officially been awarded to the landowner, Maurice Williams by Judge Battey.

Battey voided the sale of "Sue" by declaring that "Sue" was 'real estate' and could not be sold by Williams without permission from the Department of the Interior. This ruling was appealed to the U.S. Supreme Court, but the Court decided not to hear any appeals during that session.

Battey also ruled that the \$5000 the BHI paid for "Sue" and the prep costs of over \$200,000 did not have to be repaid by Williams; the BHI would have to absorb them and get nothing in return.

from Fossil Finder, 3/96
Newsletter of the American Fossil
Federation

U.S. BUREAU OF MINES OFFERS A BOOK ON GEMSTONES

American Gemstones--part of America the Beautiful. Our mountains, valleys, rivers, and lakes offer not only their intrinsic splendor, but hidden beauty as well. From garnets and opals to pearls and sapphires--gems are there from "sea to shining sea."

Find out more about this natural treasure trove from the new U.S. Bureau of Mines guidebook GEMSTONES. The 8 1/2 x 5 1/2" handbook contains over 40 pages of information on the most common gemstones produced in the U.S. and the specific state where you're most likely to find them. 12 full-color plates and full-color covers provide dazzling examples of what's stored in our Nation's "jewel box" of gems.

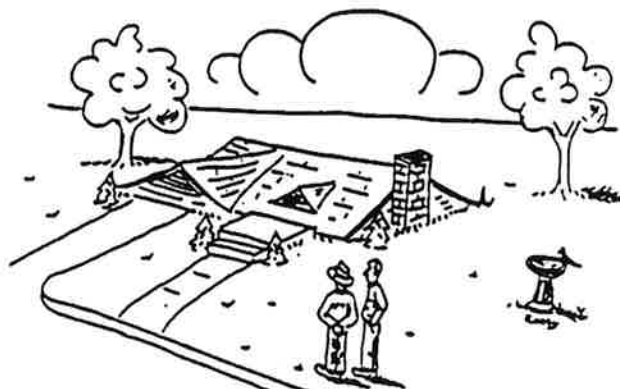
GEMSTONES serves as a basic reference for mining companies, professional collectors, and hobbyists--for just about anyone interested in these American beauties. Order your copy for only \$5.50 by calling the U.S. Government Printing Office at 202-512-1800 and asking for publication stock number 024-004-02429-1. VISA and Mastercard accepted. Ask about expedited mail service...or send checks to: Superintendent of Documents, P.O. Box 37194, Pittsburgh, PA 1520-7954. Allow 4 weeks for delivery.

from Pegmatite 5/96

INTERESTING MINING FACTS

- Television sets contain more than 35 different metals
- Each of the many brilliant colors seen in fireworks displays is due to the presence of a particular metal.
- One of the oldest mining locations in the world is reputed to be Timna Valley in Israel, where copper has been mined since 4000 B.C.
- In the United States, gold-bearing ore usually averages 0.1 troy ounces of gold per ton of ore.
- Face masks that astronauts wear are gold coated to protect them from the sun's fierce radiation.
- It takes 42 different minerals to make a telephone handset.
- Gold mining in South Africa has exceeded 12,000 feet. Many mines are so deep, exposed rock often explodes due to intense pressure from the rock above.
- Roman soldiers were paid in part with a salt ration called "salarium argentum." This is where the term "salary" comes from.
- The U.S. contains over 1/5 of the world's lead reserves, but 90% of the domestic lead that is mined comes from an area in southern Missouri.
- Tin is so important to our industrial society, the U.S. has established a five-year stockpile. It is the largest strategic stockpile of any non-fuel mineral.
- Only 5% of the titanium produced is used to make metal. 96% of the titanium processed is used to make white paint or pigment.

Reprinted from CGMS NEWS, from National Energy Foundation



I KNEW OLE ROCKY WAS GETTING
TOO MANY ROCKS IN HIS BASEMENT!

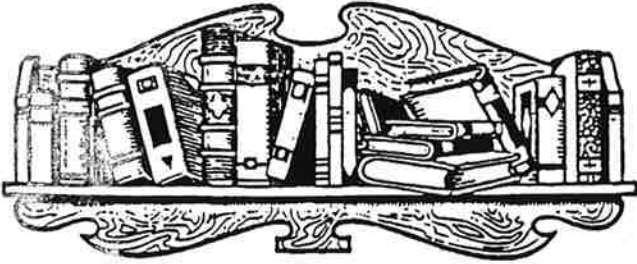
By Rocky West in the T-TOWN ROCKHOUND

1995 copyright retained by the author.

A Paleolithic Rockhound

Rockhounding is nothing new. In a cave in central France, a Neanderthal's collection was found. It consisted of a piece of fool's gold (pyrite), fossil shells and coral. All objects were collected miles from the cave. They showed no signs of being worn; instead they apparently were placed in the corner for the owner to admire 50,000 years ago.

- via The Tumbler



WORTH NOTING

Researchers have used a diamond anvil cell to induce high enough pressures to form several nickel-potassium compounds. Alkali metals and transition metals normally don't react, but pressures of 310,000 atmospheres and temperatures of 2,500 kelvins can apparently do the trick. The researchers are now trying to bond potassium and iron. In the background is the question of whether any potassium helps constitute the earth's core, which is less dense than expected for a core of iron or iron-nickel. Check the July 5 *Science* for more info.

Science News (July 6, 1996)

Who perpetrated the Piltdown hoax, a bogus fossil which combined an orangutan's jaw and a human skull? It was hailed as the "missing link" in 1912. Recent evidence fingers Martin A. C. Hinton, a disgruntled curator of zoology. Specimens which were stained similarly to the Piltdown bones have turned up in an old trunk with the initials M.A.C.H. Case closed?

Scientific American (August 9, 1996)

Fossilized dino eggs are turning up everywhere. They have been found at 200 sites around the world, including 37 in North America. Chinese authorities confiscated 3,500 eggs from smugglers in 1993 alone.

National Geographic (May, 1996)

Some Precambrian fossils in Mexico look just like the fossils that occur in later Cambrian rocks elsewhere, suggesting that no mass extinction marked the beginning of the explosion of life-forms in the Cambrian.

Science News (May 18, 1996)

Solite Quarry in southern Virginia is yielding complete Triassic insect fossils and many plants, all in great detail, even to the tiny wing hairs of insects only a millimeter long.

Science News (May 18, 1996)

The latest core sampling of ice in Antarctica has retrieved samples of ice laid down nearly 400,000 years ago, covering the entire span of the last four glaciers and their interglacials.

Science News (June 1, 1996)

Ancient Forest Rises From Italian Clay

Workers were digging for clay to supply a tile factory in Italy's Umbria region when they struck wood – old tree trunks, in fact. Upright but listing like Pisa's tower, they looked, felt, and even smelled like living trees.

But these relatives of modern sequoias and bald cypresses are about two million years old. Buried by an ancient earthquake, they were preserved by the moist clay. Sixty trees, some of them five feet in diameter and 26 feet high, have been exposed on a 25-acre site near Perugia; the tops of three dozen more break the surface. No sequoias, or anything that resembles them in the family called Taxodiaceae, live in Italy today, suggesting that the climate used to be far damper.

Exposure to air has led to some decay of the trees. "The primary object is to find a way to preserve them," says the site director, Sergio Vergoni of Umbria's archaeological superintendency. His team has erected roofs over the trunks to provide protection from the elements and is monitoring their status.

Analysis of the trees revealed that some lived for a thousand years. "They are not petrified," Vergoni says. "They are wood; they still could be burned."

FROM: Rock Talk 1/94: National Geographic, 9/94

Experience is that marvelous thing that enables you to recognize a mistake when you make it again.

-- F. P. Jones