

THE ROCKFINDER

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

SPRING



THE ROCKFINDER

APRIL, 2001

MICHIANA GEM & MINERAL SOCIETY

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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.

 ✂
 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 _____
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Please send your dues and this form to
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 c/o Bob Heinek

7091 E. East Park Lane, New Carlisle, IN 46552

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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.

Permission is hereby granted to reprint any original *Rockfinder* articles, as long as recognition is given along with the reprint.

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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 41, Number 4

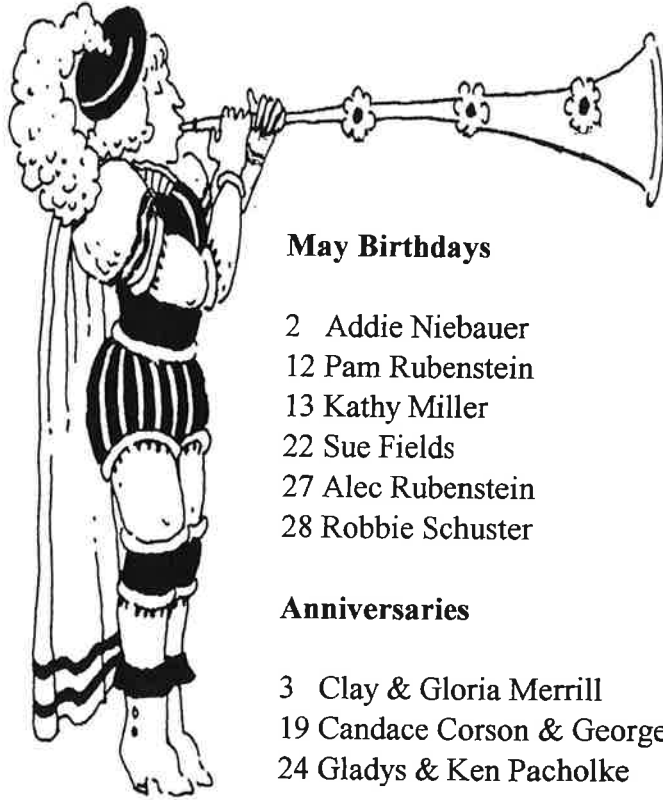
April, 2001

Meeting: Sunday, April 22nd
Doors open 1:30 p.m.
Meeting at 2:00 p.m.
Guests are always welcome.

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

Program: Bob and Margaret Heinek and Lu Ellen Brown have prepared a hands-on program using beads and wire-wrapping. Please bring, if you have them, graduated beads, old zippers (!), pliers with various jaws, a glue gun. Should be fun.

Hosts: Sister Jeanne Finske
Margaret Heinek



May Birthdays

2 Addie Niebauer
12 Pam Rubenstein
13 Kathy Miller
22 Sue Fields
27 Alec Rubenstein
28 Robbie Schuster

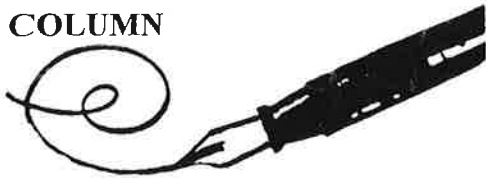
Anniversaries

3 Clay & Gloria Merrill
19 Candace Corson & George Knowles
24 Gladys & Ken Pacholke

UP AND COMING

- Apr. 21-22: Blossomland Gem & Mineral Society show, Cook Nuclear Center, Bridgman, MI. Free admission.
Apr. 27-29: Mt. Clemens Gem & Lapidary Society show, 300 N. Grosbeck, Mt. Clemens, MI.
May 4-6: Kalamazoo Geological & Mineral Society show, Fairgrounds, Kalamazoo, MI.
May 5-6: Greater Cincinnati Gem, Mineral & Fossil show, Cincinnati Convention Center, 5th & Elm.
June 1-3: Dearborn Club show, Allen Park Civic Arena, Allen Park, MI.
June 8-10: Rocky Mountain Federation show, New Mexico.
June 11-17: AFMS/South Central Federation show, Texas.
June 16-17: Michigan Geology & Gemcraft Society Rockhound Seminar, Carter Middle School, Clio, MI.
June 22-24: California Federation show, California.
June 22-24: Bloomington Rock Swap, Monroe County Fairgrounds, Bloomington, IN.
July 13-15: Eastern Federation show, New York.
Aug. 5-12: Keweenaw Week, field trips, swaps, auctions, shows in Copper Country, Portage Township School Gym, Calumet, MI. (Show is August 10-12.)
Aug. 17-20: Faceting Seminar 2001, Midwest Faceter's Guild, Mott College, Flint, MI.
Aug. 20-Sep. 1: Northwest Federation show, Washington.
Aug. 31- Sep. 2: Michiana Gem & Mineral Society show, Century Center, South Bend.
Sep. 7 - 9: Midwest Federation show, Wisconsin.
Sep. 7-9: Greater Indianapolis Gem, Mineral & Fossil Show, Hancock County Fairgrounds, Greenfield, IN.
Oct. 7: Club field trip to collect Mazon Creek fossils.

DON'S COLUMN



Well another show is passed and I believe it was a good show and well represented. There were some new dealers and some old ones. They had for the most part a wider variety of goods. I wished there was an equipment dealer.

Well Done to all who supported the club. To name a few Bill Crull and Tom Noe were there from start to finish. Ed and Patty Enos, David and Sally Peltz, Emily Johnson, Bill and Bill jr. Nelson, Bob and Margaret Heinek and Bonnie Church. Thanks to all who supported and donated their time and rocks to the silent auction.

HEY! it was sure good to see Herb and Phyllis back on the road again and Phyllis able to get around.

We have a few new members to add to our list. Lets make them welcome at our next meeting. We had quite a few younger people at the show and we made sure that they didn't go away empty handed. I think most of the time that the silent auction was the busiest place and i think we did well.

Bob will let us know how well we did at the meeting. As you know the money we make goes toward our annual trip. See Kathy Miller for reservations.

I hope Bob and Margaret did well on the show. They worked hard.

The next meeting is wire wrapping and Margaret has said all you have to do is bring yourself but if you have some needle nose pliers and end cutters please bring them. I will have a few extra sets.

See you at the next meeting.

APRIL BIRTHSTONE—DIAMOND

Diamonds— and we are talking about the one that are used as gem stones. They are usually transparent and white. It is the hardest gemstone (10 on the mohs scale). There are very few truly large diamonds of gem quality. Although diamonds are abundant large ones are rare .

A one carat diamond can cost as much as 4 times as much as a half carat stone. Another reason that diamonds are so expensive is that they are controlled by a cartel (DeBeers). If all the diamonds that were cut were put on the market you would be able to buy a diamond very cheaply.

The largest diamond ever found weighed 3,106 carats, a little over a pound. It was found in Transvaal and was named the Cullinan in honor of the chairman of the mining company that owned it. The Cullinan was presented to the king of England, King Edward VII, who had it cut into many large stones. One of them is the 2nd largest weighing 530 carats. It is called The Star Of Africa . The largest is owned by DeBeers and is called The Unnamed Brown and weighs in at 545.65carats.

There are, of course, the fancy diamonds. Yellow and brown are the most common; blue, green, orange and pink stones are rarer. The most rare diamond is the ruby red and the price is if you ask you can't afford it.

The diamonds that you never see are among the most valuable. They are the ones that are used in industry for grinding and cutting. There is no limit to the usefulness of or the beauty of the diamond.



MINUTES OF THE MARCH 25 MEETING

President Don Church called the meeting to order at 2 p.m. In attendance were 17 members and four guests. David Peltz made a motion to approve the minutes of the February meeting as printed in the *Rockfinder*. Tom Noe seconded the motion and the members voted unanimously in favor.

Treasurer Bob Heinek read his report, which will be filed for audit.

Under old business, Bob Miller reminded everyone about the upcoming field trip to Illinois to collect Mazon Creek fossils, and passed around the sign-up sheet for members to register for a space on the bus.

There was no new business.

Margaret Heinek explained that they have been able to fill out the number of dealers for the South Bend Gem Show. Some scheduled dealers had cancelled for a variety of reasons, but in the previous week she had received several phone calls, and contacts had been made with new dealers who are coming to the show. The club will, as usual, sponsor a silent auction at this show, to help subsidize club expenses such as the field trip. Contact Tom Noe if you have items to sell or donate (289-2028).

Don Church described his success cleaning the rust stains off Arkansas quartz crystals with a product called The Works. He recommends it highly, or similar products with the same active ingredient. (Contains acid; use outside.)

Don also read some correspondence from other clubs and businesses.

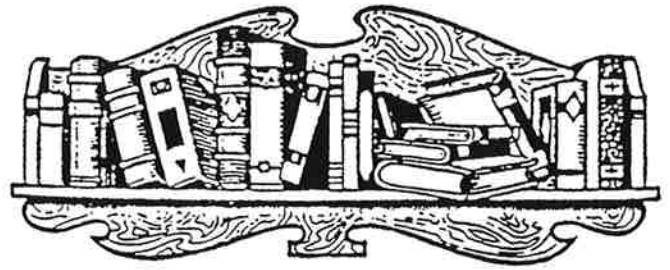
Tom Noe reminded members of the South Bend Gem Show (April 6-8) and also of the Blossomland show (April 21-22), to be held at Cook Nuclear Center in Bridgman, MI.

Displays: Tom Noe brought some agate specimens from the south Texas area, and Joe Horvath brought in some polished specimens from his collection of local material.

Sally Peltz, Pat McLaughlin and Diane Gram won door prizes.

After refreshments, the members continued making cloth bags for our club giveaways at the Labor Day show.

Margaret Heinek, Secretary pro tem


FOR FURTHER READING....

Core samples from Greenland indicate that both the North and South Poles (and Antarctica) have experienced regular periods of simultaneous melting over the past 3 million years.

Science News (Jan. 6, 2001)

A small fossil bird has been discovered with three distinct kinds of feathers, including one type which has never been found before on fossil birds. *Protopteryx fengningensis* sported downy feathers and flight feathers, as other fossil birds have, but also had tail feathers of a new type, something like elongated scales.

Science News (Dec. 9, 2000)

Ah, life! It just got a little older, at least as far as landlubber life is concerned. Life on the planet dates back 3.85 billion years, but land-living creatures started only 1.2 billion years ago . . . until some unusually carbon-rich rocks in South Africa were examined. They give evidence of microbial mats growing on soils about 2.6 billion years ago.

Science News (Dec. 2, 2000)

The Grand Canyon uncovers rocks that are 1.7 billion years old, but exactly how old is the canyon itself? Recent investigations of the rate of erosion in the area have suggested that large portions of the eastern Grand Canyon are quite young—having been eroded only within the past million years. Much of the canyon is older than that, and research continues.

Science News (Sep. 30, 2000)

MAZON CREEK FIELD TRIP**Braidwood, Illinois**

A field trip has been arranged for October 7, 2001, for fossils. Fossils of the Mazon Creek Area are contained in round or oval smooth rock bodies known as concretions. They range in size from less than an inch to a foot or more in diameter and have a gray, brown or rusty color. When split open, they reveal a fossil, though some may be barren. Concretions may be split with a hammer and chisel or by immersing them in water and alternately freezing and thawing them.

Fossils of the Mazon Creek Area are especially unique in that the soft parts of plants and animals have been preserved. Paleontologists consider this area to be one of the world's most important fossil localities. Many types of fossils represent plant and animal forms never found anywhere else in the world.

We are very fortunate to have as Field Trip Co-Chairmen Dennis and Jan Horral. They not only have been to the Mazon collecting area, but met a person that lives and collects in the Mazon area. They are going to see about arranging for him to take us to a new collecting site at Mazon Creek, and possibly to his home to see what he has collected there through the years.

Dennis and Jan have also said we should make a point to see the Mazon Creek Museum while we are there; they have seen it and said it is great.

We will board the Cardinal Bus on Sunday, October 7, at 7:45 a.m., departing promptly at 8:00 a.m., from the K-Mart parking lot at Ireland Road and 31 South. The bus is scheduled to return at 6:00 p.m. that same day.

WHAT TO BRING:

- A sack lunch, snacks and something to drink

- The usual rock hammer, a chisel, rake, etc.
- A collecting container (pail, sack, backpack, etc.)
- A box for under the bus to carry home your finds (hopefully everyone will be lucky)
- Ticks and mosquitoes may still be around, bring a repellent!
- An extra pair of shoes. One for collecting and one for the bus.

We have 23 folks signed up already, leaving 24 available seats left. Just let us know if you wish to go. Please do not make the commitment and cancel at the last minute (unless it is an emergency).

We will have the sign up sheet at March, April and May meetings, "let's fill the bus!"

Kathy Miller, Dennis & Jan Horral

MAZON CREEK FLORA

Neuropteris



Annularia



Lepidodendron Bark

MAY PROGRAM MAY BE ADDICTING

by Sam Shapiro

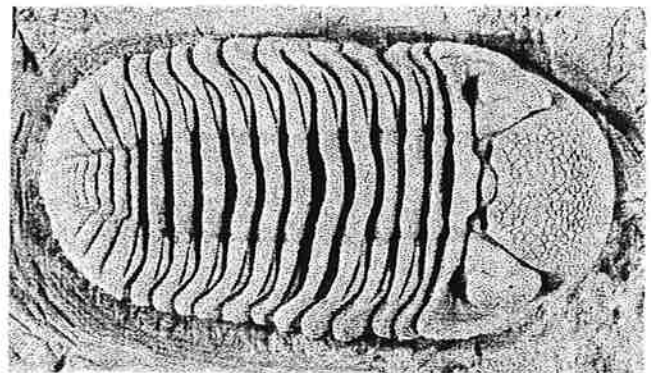
Sam Shapiro will give a program on trilobites at the May meeting. These ancient arthropods, in the same phylum as insects, scorpions, centipedes, millipedes, shrimp and lobsters, arose during the Cambrian Explosion (570 million years ago), and swarmed in the seas and on the sea bottoms during the Ordovician, Silurian, Devonian and Carboniferous Periods, and finally disappeared during the last stages of the Permian (225 million years ago), just as dinosaurs began to arrive on the scene. They had lasted about 350 million years, longer than we *Homo sapiens* are likely to do!

If you have any trilobites, or material about them, please bring them to the meeting.

Signs that Sam has “trilobite addiction” (diagnosed by Tim Husey):

1. He is preparing 500 copies of photographs from Ricardo Levi-Seti's *Trilobites* (1993) to distribute at the meeting.
2. He is planning to attend a lecture on trilobites at Western Illinois University at the end of March.
3. He does all his math on base 3.
4. He remembers the age of every trilobite in his collection, but can't remember the date of his wedding anniversary.
5. He has maxed out all his credit cards buying trilobites on the Internet.
6. He makes terrible puns: When a protaspid (juvenile stage) bit Margaret High Neck, he advised it to “try low bites.”
7. He told his wife to “Get off your pygidium (rear segment), and make me some dinner!”
8. When he speaks of the “Good Book,” he is referring to Richard Fortey's *Trilobite!* (2000).
9. He has asked his friend Euripides Avgoustoglou, living in Athens, to give his new baby (expected in September) the middle name Paroxides.
10. He puts himself to sleep counting *Phacops rana* swimming over crinoids.
11. He asked Gloria to remove her china from the living room cabinet so he could display his trilobites.

12. He knows that “punk ek” refers to “Punctuated Equilibrium” (a theory by Stephen J. Gould).
13. He gets so interested in the resemblance of lobsters to trilobites that he forgets to eat them.
14. He asks his relatives to be sure that their Christmas presents for him are more than 250 million years old.
15. He is preparing to bake trilobite-shaped cookies (well, Proust's madeleines) for the May meeting.
16. He has memorized the internet address of <http://www.ualberta.ca/~KBrett/index.html>.
17. When his children interrupt his trilobite cataloging, he yells “You are driving me out of my cephalon (head)!”
18. His watch is set to run on MCT (Middle Cambrian Time).
19. He spends more time with Paul Mandell, his paleology adviser, than with his financial adviser.
20. His financial adviser advised him to get rid of his paleology adviser.
21. He got rid of his financial adviser.



Phacops rana crassituberculata

ROSTER CORRECTION

The correct e-mail address for Tom Noe is veritas@trinityschools.org. Do not use the one in the roster.

ICE AGE GIANT BEAVER IN OHIO

Between ten and twelve thousand years ago, there were prehistoric swamp rodents that were neighbors of Ohio's first Indians. We refer to them as giant beavers because of their size and relationship to modern beavers.

Studying fossil remains, scientists were able to determine that the giant beaver was the largest rodent in North America during the Ice Age. Its bones suggest that it was larger than six feet and weighed between 300 and 400 pounds.

Other large mammals in Ohio during the Ice Age were the now-extinct mastodons, mammoths, ground sloths and stag moose. Some Ice Age animals, including muskrats and smaller beavers, survived and still inhabit Ohio.

During the Ice Age, which began about two million years ago, summers were cooler and the snow and ice did not melt as readily as they do now. One by one, over thousands of years, several lines of mile-high glaciers formed in Canada from unmelted snow and ice and moved southward into what is now the northern United States.

Each glacier scraped its way across Ohio, smoothing hills and filling valleys. Eventually, climatic warming trends caused the ice to melt faster than it was building up. About 14 thousand years ago, the last of the large glaciers melted away. During the latter part of the Ice Age, many of the large animals that we know today only as fossils lived in Ohio. The giant beaver is one of them.

The discovery of it was accidental. In 1957, construction workers were building a road at the Northern Lights Shopping Center in Columbus, OH. They tried to strengthen the roadbed by replacing soft peat with gravel. A local gardener took some of the peat and found in it what appeared to be a very unusual fragment of bone to which large teeth were attached. Curators at the Ohio State Museum found many pieces of wood at the site that had been chewed by animals, some of which appeared to carry the toothmarks of the giant beaver.

From an article by Carl Albrecht, Curator of Natural History, via *Ohio Historical Society Echoes*. (c. 1996)

MIDWEST FACETERS GUILD

The Midwest Faceters Guild proudly presents its twelfth annual weekend Faceters PLUS Seminar, which is devoted to faceting, facts, friends and fun. The Midwest Faceters Guild presents some of the finest instructors ever gathered to share their years of cutting and teaching experience. Join in for an enjoyable, fact-filled weekend of learning. Meet old friends and make new ones!

Our classes this year include four levels of faceting: beginners, advanced faceting, open faceting and gem CAD, plus lost wax casting, chain-making, jewelry finishing and bead workshop.

Once again, this year's seminar will be held on the beautiful campus of the air-conditioned Mott College, located in Flint, Michigan. The dates are August 17 to 19, 2001.

Registration is limited, so don't be disappointed. Send in your registration early. The deadline for registration is July 24, 2001. Classes are filled on a first come, first served basis.

Packets for the seminar are obtainable by contacting Harold "Arizona" Rice by phone, e-mail or the mail service. Following are the lines of communication: Harold "Arizona" Rice, 122 Lois Lane, Mt. Clemens, MI 48043, or by phone (810) 463 5972, or by e-mail azrice@wwdb.org.



A HISTORY OF FACETING

Before the 17th century, the general procedure was to grind and polish existing crystal faces or other surfaces to increase transparency and reflecting ability. It is hard to believe a process so basically simple as that for faceting gems could have been a tightly controlled trade secret for several hundred years.

The first reference to a faceted stone appears as early as the 800s in a description of the gold cap of Duke Tradonico of Venice. The cap held a sparkling ruby and diamond with eight facets as well as 23 emeralds. In ancient times, little or no attempt was made to shape gemstones and all that was done to improve their appearance was to smooth and polish the natural form. They were coveted merely for their surface coloration and not for the internal glow, which at that date was unknown.

In making up jewelry to wear, they almost certainly chose the stone nearest the color and size required by the setting and not contrariwise—adapt stone to setting. It does not appear the ancients understood this art of lapidary so well or valued it as highly as we do. They preferred weight to brilliancy, size to effectiveness. They were generally satisfied to rub down to polish the surfaces and retain the fanciful shapes the stone had when found.

The clasp of the regal mantle of Charlemagne (742-814), in the French National collection, is found set with diamonds with their natural faces only partially polished. In 1290, a guild of gem polishers and cutters was formed in Paris, and in 1373 the art of diamond polishing was practiced in Nuremberg, but with what method of procedure is unknown to us.

Records show that in 1412 the Duke of Burgundy (Charles the Bold) possessed a sizable diamond with lozenge-shaped facets. Moreover, even in the town of Bruges, a number of gemcutters seem to have been doing diamond polishing in 1465, for they are referred to as diamond polishers in legal documents of the time.

The brilliant cut is said to have been originated by Cardinal Mazarin (1602-1661); he was a protege of Cardinal Richelieu and succeeded him in 1642. He was an Italian and later chief minister to Louis XIII. The main centers of diamond cutting, in that period, seem to have been Antwerp, Paris and Lisbon.

Lisbon cutters were mostly Jews, who reached a pinnacle of perfection unexcelled until the later 18th century. They were expelled and then migrated to Holland. Mazarin was endeavoring to revive the diamond-cutting industry of the French crown. . . . The promise of great things for diamond cutters of Paris was short-lived. Jean Baptiste Tavernier (1605-1689) visited India in 1665 and found a large number of active diamond cutters. They had no greater range of knowledge and skill than European cutters. If a diamond was perfectly clear, they merely polished the natural faces. If it contained flaws or specks, they covered it with numerous small facets, haphazardly placed. It was a general practice to have facets beautify a defective stone.

No author, *Rock Rollers* (Aug., 1998)

TIRE TUMBLERS

The Port Headland Rock Shop in western Australia uses tires off large earth movers as tumblers. These tumblers use 600 pounds of gravel and the drive shaft and rear end of a small car. And we think everything's big in Texas!

Stone Chipper (no date)

FOSSILS AND THE LOWLY AMATEUR

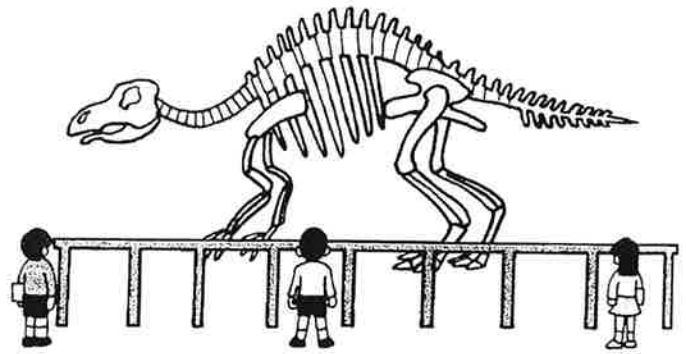
by Bill Alcorn

One of my favorite publications is the magazine *Rock & Gem*. Except for its yearly issue on gold, which I find to be too repetitive from year to year, each issue is always filled with new and interesting articles about every phase of our hobby.

The September, 2000, issue had several especially interesting articles on fossils. However, a somewhat disturbing article was one by Steve Voynick, "The Fight For Fossils." The magazine lacks a section of letters to the editor or I would be sorely tempted to write a response to this article, which seemed to me to be decidedly in favor of acquiescing to those who want to stop amateur collecting on public lands. While I am against being confrontational with government agencies and believe there should be more cooperation with them instead, there are several positive aspects to amateur fossil collecting that I felt were completely missed in this otherwise very informative article.

I have no problem at all with the idea that museums and institutions of higher learning should be able to study the fossil remains of rare and unusual vertebrate specimens unhindered by amateurs, and that sites where these are located and brought to their attention should remain off limits to scavenger rockhounds when an effort is being made to preserve such sites and the fossils they contain. I have no problem with the idea that these professionals have greater expertise and access to the equipment necessary to study these finds, and to provide knowledge and displays of these discoveries to the general public. I do have a problem with the idea that ALL public lands should ever be made off limits to amateur fossil lovers and collectors. I am totally appalled at the idea put forward in the last paragraph of this article that, as a trade-off for being able to collect fossils, "every amateur paleontologist and fossil collector will be able to enjoy exciting new books and museum displays that answer questions ... (of the geological past)".

Can a picture of a thing in a book ever serve as a substitute for reality? If that is true, maybe I should just keep a picture of my wife and family on the mantle and let them go live somewhere else. It



was being able to hold a piece of geological history in my own hands, it was the excitement of searching out and finding these fascinating objects myself that got me interested in fossils and earth sciences. It is being able to hold these pieces of earth's history in my hands and to look at the real thing whenever I want that keeps me excited about this hobby.

Somebody I met as a teenager while walking through the fields and pastures one afternoon got me started. He was looking through the gravel in an abandoned railroad cut for crinoid stem sections. He showed me the real thing so I started looking. What interest in earth science do we expect children to take if the only fossils they see are in books or museums, and they are given to understand they will never be able to collect them unless they get a doctoral degree in paleontology and are lucky enough to get a job at a university or museum?

It has been pointed out time and again that amateurs are responsible for the vast majority of important fossil and archaeological finds, and that the majority of amateur fossil hunters will, on making a really significant discovery, contact a university or museum with their finds.

This was done by members of the Leesville Rock Club when they discovered a number of unusual fossils below the Toledo Bend Dam. There was some interest shown by university scholars, but still most of the fossils at this site are washing into oblivion downstream from the site of exposure.

It has also been pointed out time and again that most fossils will, when uncovered by erosion, construction, excavation or by other means, in a short period of time be weathered away to rejoin the rock cycle as a useless sediment. A few years ago (before picking up artifacts around Lake Sam Rayburn was made a punishable crime) we discovered fragile early

American artifacts that had just been uncovered by high water erosion, but were already in the process of weathering away to useless rubble. That lake has done a wonderful job, during periods of high lake levels and stormy weather, of uncovering artifacts. Interesting leaf imprints and other fossil materials that had been embedded for millennia in layers of soft mudstone and even petrified mud ripples were exposed. In only a very short period of time the mudstone-encased fossils are worn away to rubble, and the artifacts are washed out into the deeper parts of the lake to be covered over again by sand and mud at depths where they will never again be seen.

Another article in the same issue of the magazine we were quoting above made me feel much better. It was a fascinating article on "Clinker Shale Fossils" by Sam and Ruth Kirkby. They made a chance acquaintance with a Montana rancher who, on discovering their interest in fossils, invited them to go out on his ranch where he had been clearing a place for a cattle tank. He had discovered a lot of "the prettiest" leaf fossils and thought they might be interested. He was bulldozing the fossil shale into a nearby gully, and thought they might like to save some before they were destroyed. On arriving at the location they found some fabulous fossil leaves, catkins, and filbert nuts in a burned out coal bed. The point here being that these fossils, if not collected at that time, would never be seen again as they were about to become fill dirt in a gully wash.

I guess my real point is, if I have one at all, let's not just roll over, belly up, to those who feed us with the nonsense about the rarity and value of every fossil and that only those who are smarter than we are should have access to public lands and fossil collecting, and that we amateurs should not be allowed to collect, display and enjoy our own specimens.

The museum can and should keep the dinosaurs and mammoth fossils, the rare and exotic items that we amateurs don't have the time or means to collect, or the space to display. But leave us to our fossils leaves and crinoids, our ammonites and brachiopods, our little fossil fishes and trilobites. They already have more than they want or need of the more common fossils we collect and they can always get more if they need them, the same way we do. Just get out there and collect them before nature "recycles" them.

The Pineywood Rooter (no date)

KENTUCKY CRINOID SITE

By Alan Goldstein (Alan is the naturalist at the Falls of the Ohio State Park.)

Well, it only took 11 years, but the research from a crinoid site I found in Hardin County, Kentucky, was finally published in the *Journal of Paleontology*! It was co-authored by my friend and codiscoverer Ron Yates and crinoid expert William Ausich.

The site was a lot like the more famous localities discovered near Crawfordsville, Indiana, in the 19th century. The deposit occurs in the Borden Delta of early Middle Mississippian age (350 million years ago). The types of crinoids were surprisingly different from the Crawfordsville site. For instance, of the 500+ crinoids we collected, only one *Macrocrinus* and one *Agaricocrinus* were found. They are the most common from Indiana. After Dr. Ausich completed the research of the specimens, we ended up with 8 new species. One of them is named for (my wife) Debbie. The 97 most important specimens are being donated to the Smithsonian. Another 100 or so of lesser significance are going to be deposited in the Orton Geology Museum at Ohio State University.

The site produced shark teeth, a lot of hexactinellid (glass) sponges, and other more typical and unusual Mississippian-age fossils (brachiopods, bryozoans, snails, trilobites, echinoids, conularids and rhodophyte algae remains). Among the more curious fossils were arthropod tracks in limestone from a critter about 3" wide and a conularid impression in limestone from a beast about 8" long! (Both were found in the winter when the sun angle was low and their shadows made them visible.) I noted a seven-foot long crinoid stem on some mega-ripples that were so wide, the back wheels of Ron's full-size pick up truck were on one ripple crest, the front were on the next! Unfortunately the site is now flooded and inaccessible.

My next project is a book on the paleontology of the Falls of the Ohio for Indiana University Press. I have got a lot of research to do for this one!

M.A.P.S. Digest (Jan., 2001)