

# THE ROCKFINDER

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

## APRIL SHOWERS...



# THE ROCKFINDER

APRIL, 2000

# 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  
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Please indicate areas of special interest.

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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.

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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.

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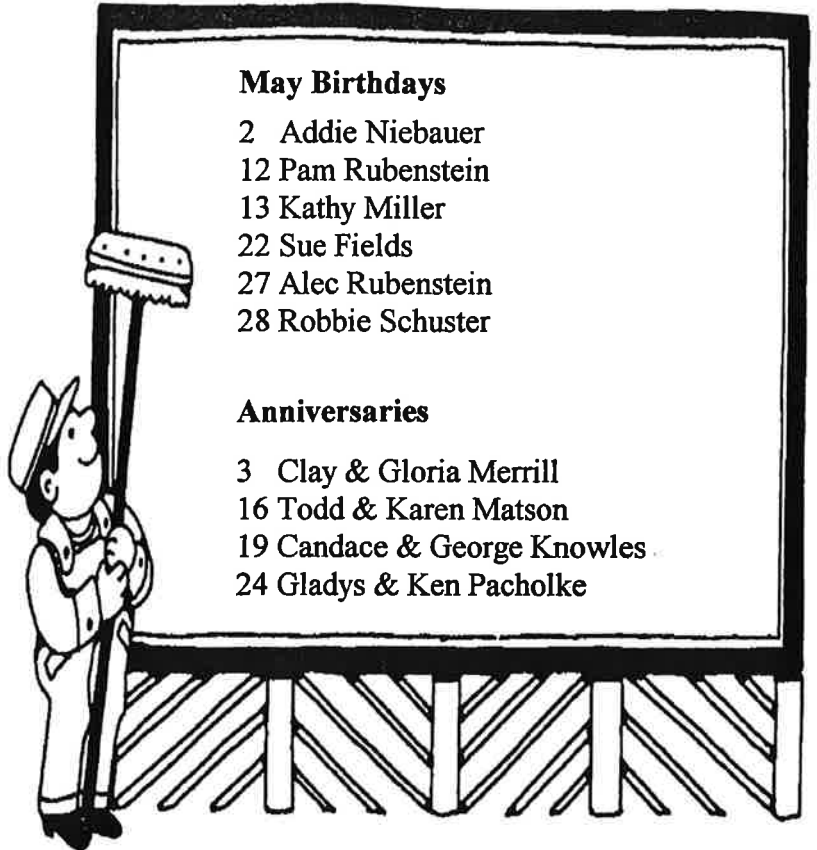
# THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

Volume 40, Number 4

April, 2000

**Meeting:** There is no regular meeting this month. See field trip news on page 4 of this issue. The next club meeting will be Sunday, May 21.



## 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  
16 Todd & Karen Matson  
19 Candace & George Knowles  
24 Gladys & Ken Pacholke

## UP AND COMING

April 12-15: Central Illinois fossil show, Days Inn, 1400 N. Hwy 67, Macomb, IL.

April 14-16: MAPS National Fossil Exposition (this show's theme is teeth) Western Illinois University, Macomb, IL.

April 29: Auction, listing "lots of gemstones," 10:30 a.m., 7 miles north of Niles, at 3136 M-51 North. 616-461-6271.

May 6-7: Bruckner Gem & Mineral Club show, Junior Fairgrounds Country Road, 25-A North, Troy, OH.

May 13-14: Cincinnati Mineral Society gem, mineral, fossil, jewelry, lapidary arts retail and wholesale show, Sabin Cincinnati Convention Center, 5235 Elm Street.

May 20-21: Cleveland area gem & mineral show and sale, Cuyahoga County Fairgrounds, Bagley Road, Berea, OH.

May 27-29: Chicago Gems and Minerals, DuPage County Fairgrounds, Wheaton, IL.

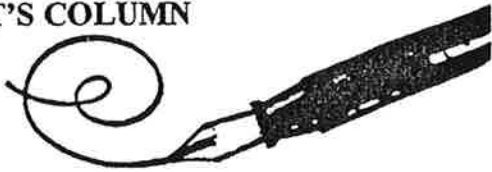
June 2-4: Dearborn Club's southeastern Michigan gem & mineral show, Allen Park Civic Arena, 15800 White, Allen Park, MI.

June 17-18: Michigan Geology & Gemcraft Society, MGAGS rockhound seminar at Roscommon Middle School, Roscommon, MI.

June 23-25: Gem, mineral, fossil show & swap, Bloomington, IN, the Lawrence County Rock Club's "Bloomington Swap" (10-7, 8-7 & 8-4)

August 18-20: Midwest Federation show and convention, St. Louis, MO.

## MARGARET'S COLUMN



Looks like we are going to have good weather for a while. I sincerely hope we have good weather for our tour of Notre Dame's mineral exhibits. Right now mark your calendar for the date we are to go there. APRIL 30, and we meet at the library at 1:30. Our member, Sam Shapiro, has made arrangements for a graduate student to lead us through the tour. (Thank you, Sam, for making the arrangements.) It has been several years since we were there. The parking is across the street from the Hesburgh Library.

Also mark your calendar for our picnic, August 27, to be held at the home of Don & Yvonne Church in Sturgis, MI. Don is a good cook, and he will have hot dogs and hamburgers. If you missed the field trip to the gravel pits last year near Don's, you missed a good time, so plan on going to the picnic. We will try to carpool, so if you want to drive plan on taking a car full. I know it is a long time until August, but we do want you to mark it on your calendar.

Our Labor Day Weekend show is the following weekend, and final arrangements will be made for workers, so plan on going. Notre Dame changed their football schedule and we are having problems getting rooms for our dealers. This is the second time they have done this, and the motels raise their rates so high, it is ridiculous. Rooms have gone from \$50.00 to some charging \$135.00 and more. Even Century Center did not know they had changed the schedule, and "done us dirt." Is there any of our members that would have a room they would rent to a dealer for two nights? If so, let me know so we can make arrangements for them. It appears we may have to have only dealers who are owners of trailers or motor homes. We know we can get enough to fill the booths, but we hate to lose the ones who do not have their "homes" with them.

I know Tom Noe appreciated the workers he had at the silent auction at the April show. We have some new members who signed up at the April show.

Add the following to your roster:

Mary J. Frederick, 2425 Normandy Dr., Mishawaka, IN 46545, with juniors Veronica Frederick and Tony Brumbaugh.

Edward & Patty Enos, 21360 SW. R. 120, Elkhart, IN 46516.

Renewals:

Dennis and Janus Horrall, 16733 Jackson, So. Bend, IN 46614

Richard & Chris Samuels, 52844 Cumberland, Granger, IN 46530, with juniors Travis, Kyle and Megan.

Henry Foster, 48 Holstein St., Niles, MI 49120.

Stan Jacobs, 93 W. Pas Rd, Michigan City, IN 46360.

Welcome to all. Several took applications for membership, so we may get more.

Thanks to Don Church and Bill Nelson, the storage shed has been cleaned out and room is made for new items for the silent auction. We have been given a lot of new items for the club, in the way of petrified wood, slabs and rock by Leo and Elma Heynssens who are in the process of moving west. We will sure miss them. Bob and I have known them since the '60s, when they became members of the Michiana Rock and Gem Club (before the club became Michiana Gem & Mineral Society).

Remember to mark your calendars for the Notre Dame tour and the August picnic.



**"Chonetes" yandellanus Hall**

I asked one time, "How do you clean your quartz crystals?" The answer given was, "I use Iron Out." I bought some from the local hardware (grocery stores also carry it), and sure enough the crystals came clean. I thought nothing could take the iron stains out of them, but now I have some very beautiful crystals. Iron Out contains sodium hydrosulfide and sodium bisulfate, so keep it away from children and be careful when you use it, and follow the directions on the bottle.

Paul W. Good, via *The Cowtown Cutter*, (Sept., 1998)



## MINUTES OF THE MARCH 26, 2000, MEETING

President Margaret Heinek called the meeting to order at 2 p.m. In attendance were 29 members and five guests. Hosts Don and Yvonne Church and Molly Elwell prepared a table of refreshments in grand style with a St. Patrick's day theme.

Lu Ellen Brown, who joined the club during the meeting, presented an informative program and showed the various stages of making wire-wrap rings. Members were impressed with the simplicity of the process and the outstanding results of lapidary craft.

The minutes of the February meeting were accepted as printed in last month's *Rockfinder*. Bob Heinek gave the financial report, which will be filed for audit.

The club has purchased two new books which members can obtain at cost: *Roadside Geology of Indiana* and *Geology Underfoot in Illinois*. One copy of each will go into the club library, and the others are available to members first; the remainder will be sold at retail price at the shows. Call Margaret if you want copies at the reduced price.

Under old business, Tom Noe noted that the club will be running a silent auction as usual at the South Bend Gem and Mineral Show at Century Center in April, and asked for volunteers to help out. Proceeds from the auction go to the club to subsidize field trips.

The meeting next month is a field trip to the Notre Dame campus. Details are to be reported in the April *Rockfinder*. Kathy Miller described the Rockhound Seminar sponsored by the Michigan Geology and Gemcraft Society. It will take place the weekend of June 17 in Roscommon, MI, with numerous lapidary workshops and informative presentations on minerals and craftwork. Our own Bob Miller will present classes on carving stone. For more information, contact Cathy Hodgson, 1360 Roods Lake Road, Lapeer, MI 48446 (810-664-8985) or e-mail (hlrcc.com).

Kathy also gave us a rundown on the plans for the annual bus trip. This year we are scheduled to go to the Grand Rapids area the weekend of September 15. (Details are elsewhere in this *Rockfinder*.) Deadline for sign-ups is the middle of July.

Bob and Margaret, Bob and Kathy and Herb Luckert all attended the presentation at Brown School and learned about the new science program being put into place by the South Bend schools. Margaret explained how the program works—very experiment-based and full of activities rather than book-learning. The organizers have asked the club whether there are any volunteers who will help with the preparations and handling of materials (sand, gravel, minerals) after the program gets going. If you would like to help, contact Margaret to volunteer.

Door prizes went to Leo Heynssens, Diane Gram, guest John Matwyslyn and Addie Niebauer.

Gladys Pacholke, Secretary

## SILENT AUCTION A GREAT SUCCESS

Our club operated a silent auction at the South Bend Gem Show the weekend of April 7 through 9. Proceeds will go toward expenses for club field trips.

Many thanks to Tom Noe, who organized the effort, and to all the club members who worked so hard to make it a success: Fr. Tony Spanley, who picked up items from the storage shed, Don Church, Herb and Phyllis Luckert, Bill Nelson, Bill Nelson, Jr., Emily Johnson, Fred Baker — all of whom helped carry and sell and price and keep customers happy. As always, thanks to Bob and Margaret Heinek, who helped out in innumerable ways.

Special thanks to Leo and Elma Heynssens, whose generous donations of materials from their collection were the backbone of what we had to sell.

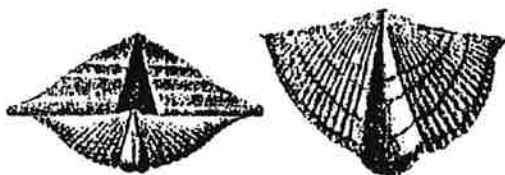
It was also fun just to sit and visit with club members during the slow times at the auction, and to greet the regular bidders who know that our auction table is a place to find bargains. Swapping stories was a highlight of the weekend. We'll hold the auction as usual at the Labor Day show, so start thinking about volunteering to help out. It's fun (despite aching backs)!

## NO MEETING IN APRIL; COME ON THE FIELD TRIP

Instead of an April club meeting, members are invited to take a geology tour of the Notre Dame campus. Sam Shapiro has organized this (thanks, Sam) and it should be interesting. It will take place one week later than normal, on Sunday, April 30. All members are welcome to attend. The tour will include a stop to view the stone mural on the front of the Notre Dame library, which is the largest stone mural in the world. From there it's a short walk to the Cushing Hall of Engineering, the new site of the Geology Department. On display are numerous cases of minerals and fossils, including a large selection of San Diego County tourmalines.

Meet in front of the library at 2:00 p.m. You can park in the lot directly across the street from the library, but the entrance is not on the street. You have to drive around behind the lot and enter there. Turn east at either the light on Bulla Road or the light right next to the library itself. You'll see from there how to drive around behind the parking lot to the entrance. The trip will take place rain or shine. Other possible stops include the recently renovated Administration Building, the new bookstore or the nearby cemetery, where stone weathering can be observed. These options are up to you. The formal tour will include only the mural and the geology displays.

The next meeting is the regularly scheduled one in May.



*Orthospirifer oweni* (Hall)



*Cupularostrum sappho* (Hall)

## MORE GEOLOGY IN POETRY

By Sam Shapiro

Literary criticism, unlike geology, is not an exact science. If you give experts a fossil or a piece of rock, every one of them will agree that such-and-so is a crinoid, a piece of quartzite, a dinosaur coprolite or an Ordovician brachiopod. However, if you ask who the greatest writer is, a Greek is liable to say Homer, an Italian Dante and a Russian Tolstoy or Pushkin. Many of us, English speakers, will nominate William Shakespeare.

In his plays and poems, the Bard of Avon wrote about many subjects, and in his sonnets (published in 1609) he referred to the subject of interest to our club--geology.

*from Sonnet 55 (referring to erosion)*

Not marble, nor the gilded monuments  
Of princes shall outlive this pow'ful rhyme,  
But you shall shine more bright in these contents  
Than unswept stone, besmeared by sluttish time.

*Sonnet 64 (continental drift?)*

When I have seen by Time's fell hand defaced  
The rich proud cost of outworn buried age;  
When sometime lofty towers I see downrased  
And brass eternal slave to mortal rage;  
When I have seen the hungry ocean gain  
Advantage on the kingdom of the shore  
And the firm soil win of the wat'ry main,  
Increasing store with loss, and loss with store,  
When I have seen such interchange of state,  
Or state itself confounded to decay,  
Ruin hath taught me thus to ruminare,  
That time will come and take my love away.

This thought is as a death, which cannot choose  
But weep to have that which it fears to lose.

*Sonnet 65 (weathering and abrasion)*

Since brass, nor stone, nor earth, nor boundless sea,  
But sad mortality o'ersways their power,  
How with this rage shall beauty hold a plea,  
Whose action is no stronger than a flower?  
O how shall summer's honey breath hold out  
Against the rackful siege of batt'ring days  
When rocks impregnable are not so stout,  
Nor gates of steel so strong, but Time decays?  
O fearful meditation! Where, alack,  
Shall Time's best jewel from Time's chest lie hid?  
Or what strong hand can hold his swift foot back?  
Or who his spoil of beauty can forbid?

O none, except this miracle have might,  
That in black ink my love may still shine bright.



## **CLUB WEEKEND BUS FIELD TRIP TO GRAND RAPIDS UNDERGROUND MINE, FREDERIK MEIJER GARDENS, MUSEUMS AND CHENEY LIMESTONE QUARRY**

By Kathy Miller, Field Trip Chair

The Michiana Gem & Mineral Society has a Cardinal coach chartered for September 15, 2000, through September 17, 2000, for this field trip. This is the first weekend field trip where rain will not be a concern; you can't beat that for a great time!

The following is an itinerary for those who will be going. **Friday, September 15**, meet at the K-Mart parking lot on the corner of Ireland Road and 31 South. We will board the bus at 4:45 p.m. and leave promptly at 5:00 p.m. (Note, the time is later than previous years.) Your cars may be left in the K-Mart parking lot for the weekend. We will be arriving at the Super 8 motel in Wyoming, MI (a blanket city of Grand Rapids) for the two-night stay.

**Saturday, September 16**, we board the bus at 9:30 a.m. There is a Denny's restaurant next door for those wanting breakfast before we leave. The bus will take us to the Michigan Natural Storage Company. We will enter the mine at 10:00 a.m. and will be able to collect until 12:30 p.m. When we leave, the bus will take us (if it is a nice day), to the Frederik Meijer Gardens that open at 12:00 noon. This is where you will see the famous copy of the huge bronze horse by Leonardo da Vinci. The gardens are easily accessible and wheelchairs are available. Not only are there nature trails but many exhibits events and programs to be seen while you are there. We will board the bus again between 4:00 and 4:15 p.m. For lunch you may either brown bag or buy at the Garden View Cafe on the grounds.

Dinner that night (as of this writing) has not been decided on. This will be finalized soon.

If it is raining on Saturday, we have the option of the Henry Ford Museum or the Public Museum of Grand Rapids; both are excellent.

**Sunday, September 17**, we board the bus at 9:00 a.m. If the weather is sunny we are on our way to Bellevue and the Cheney Limestone Quarry, where

we will do more collecting. After we leave there we will stop for a quick fast-food lunch on the way home.

If it is raining on Sunday, once again we have the option of going to a museum in Grand Rapids and leaving for home from there. We will be back in South Bend at 6:00 p.m.

The following is the cost and additional info: (1) The Super 8 has reserved 19 no-smoking rooms with 2 queen size beds in each room for us at a block room rate of \$54.42 per room per night (that includes tax) which comes to \$108.84 for the two nights. The bus will make a quick stop for fast food on Friday night or you may wish to bring food. The same for Saturday noon, brown bag or buy. Saturday night we will eat together as a group at a restaurant, and Sunday buy on the way home. As I said, there is a Denny's next to the Super 8.

To collect in the mine there is a \$2.00 charge per person, child and adult. The F. Meijer Garden has a fee of \$6 adult, senior \$5, children 5 to 13 \$3, and under 4 free. I do not have the cost of the museums yet, but I am sure there is a fee also.

(2) What to bring: lantern or flashlight (extra flashlight or batteries), rock pick, small chisel, hard hat, collection basket or bag, safety glasses, boots or sturdy shoes (not sneakers, it gets damp and sticky in some places), and a jacket (the mine temperature is 52 degrees and it has six miles of tunnels). You will use the same shoes for the Cheney Limestone Quarry and the same equipment except for the flashlights. Bring enough collecting containers to be kept under the bus. Newspapers or egg cartons might be useful for any selenite crystals you might find. Some people may take optional equipment of a heavy hammer, small ladder or sturdy bucket to stand on.

(3) What to find: At the mine, small selenite crystals, usually found in openings high along the walls. Most of these are transparent and fragile. Pencil spar can be found, as well as gypsum for carving or specimens when it dries out. Gypsum crystals are actively growing. At the Cheney Quarry we will be looking for pyrite, peacock pyrite, calcite and fossils, fresh country air and being outdoors.

(4) At the mine you may wish to bring water. The mine is 85 ft. underground and there are NO services available. We will be there 2 1/2 hours, so be prepared with your own water. Restrooms are available on the upper level.

(5) Safety release forms: You will be required to sign a release stating that the storage company is not responsible for accidents or injuries. Children (I am guessing on age, but probably 10 and under) are requested not to use tools, but have parents use the tools for them.

(6) For those wishing to go but NOT to enter the mine, I am told there is good collecting on the surface in tailings. So you should be able to collect above. Let's hope it doesn't rain for you.

It is very important that you bring two pairs of good walking shoes: one for the mine and quarry and one pair to wear on the bus and walk the gardens or museums. Don't forget plastic bags to put your collecting shoes in for under the bus.

Bring snacks for the bus and your motel room. Bring beverages for the bus and your motel room. Bring yourself and enjoy a fantastic rockhound weekend for all ages in the company of friends who love the hobby.

**P.S. Get in touch with me ASAP as I have an early deadline date this year because of the motel. Kathy Miller 291-0332 or (KanBrock@aol.com).**



Photo by Doris Jones

By Doris Jones

The word "crinoid" means lily- or flower-like. My husband Dick and I started collecting them in 1954. Over many years of collecting we didn't find many complete crinoids. By complete I mean having the head, stem and roots together. Some of the crinoids have a foot system, and others just taper down to nothing.

Crinoids are not extinct today. Scientists think

the crinoids living today evolved from one species that survived the great extinction at the beginning of the Triassic Period. There are two types, free floating and one with a stem and foot. The stalked ones usually live in deep water. Some free floaters have been seen swimming around the sunken World War II ships in Japanese harbors. Crinoids are animals, they eat plankton, and reproduce like some fish. The female releases a milky cloud of eggs and a nearby male releases a milky cloud of sperm.

Crinoids are related to blastoids, starfish, edrioasterids, echinoids (sea urchins and sand dollars) and sea cucumbers.

The crinoid fossils of the past were undoubtedly as colorful in appearance as modern sealife (like the colors of the starfish they are related to, which we see in today's seas). The December 1996 issue of *National Geographic* has colorful pictures that give us an inkling of how beautiful the crinoids would have been in the distant past. Certain species always have a distinct fossil coloration when found. One species is always dark, and it makes me wonder if it was in life a dark green or black; another is a light tan, could it have been orange? There is no proof, of

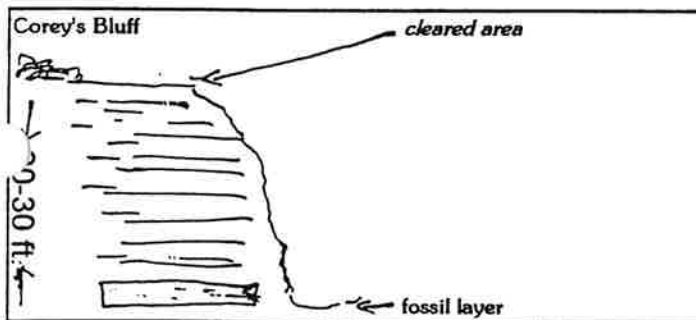
The discovery of the Crawfordsville beds started with the founding of Wabash College in 1832. Five Presbyterian ministers decided to bring Christian education to the frontier. One, Rev. Edmund Hovey, developed an interest in science, and especially in geology. He started taking students on "collecting" trips along Sugar Creek, where stems had been found in the gravel beds and float material. In 1842 a fossil collector in New York offered \$5 a bushel for crinoid stems. Horace, the nine-year-old son of Edmund, filled the offer. There is no record of collecting for almost ten years. In 1851 two teen-age Wabash students found some good crinoid heads in matrix in a ravine of the creek. Sometime in 1850s Orlando Corey, a machinist, gunsmith and locksmith, discovered that the crinoids could be dug from the matrix. So the bluff became known after that as Corey's Bluff. In 1859 Corey sent some specimens to a publisher, who published the first descriptions of the crinoids from Crawfordsville. After that publication it became a free-for-all for a while.

Then there isn't much recorded about collecting for almost 30 years. In the 1890s Frank Springer collected and worked with the crinoids for some 10 years until 1906. In those early days of



digging, the heads were chipped out of the matrix, they were tossed into a barrel and sold to anyone who asked. Then there wasn't much collecting until Gary Lane did a study for UCLA in the mid 1960s. He was interested in the ecology of the bluff. (There wasn't much ecology with the crinoid heads that he found in the basement of UCLA!) My husband Dick and I bought the land before he was finished with his dig, but we didn't interfere with his dig. We had problems with encroachment from then on until we sold the property.

The area where we made our digs was at the edge of Corey's Bluff. (The bluff was carved out by the creek at the foot of it.) To prepare for a dig it was necessary to clear a small area (take off any trees, rocks, shrubs etc.). Our digs could range in size from 4 by 5 feet to as large as 6 by 8 feet. We called that cleared area a table. Then, using pry bars, picks and



sledges, we had to go straight down 20 to 30 feet. We would only occasionally find some crinoids on the dig down to the fossil layer. It was evident that the crinoids were buried alive in some sort of a natural disaster, maybe a mudslide. The area was thought to have been a shallow cove in the sea. The crinoids were covered instantly, so the currents and other animals didn't have a chance to tear them up. When we first exposed the crinoids we didn't try immediately to work on them. The matrix they were in was still very moist and we packed them and set them aside. They need to be thoroughly dry.

I prepare my own fossil crinoid plates. I have a miniature sandblaster hooked up to an efficient dust-collector that I use. I have worked sometimes a few hours to clean a plate and other times it might take me days of work. I have even worked a whole summer on one plate that had many crinoids on it.

There are hundred of species. Montgomery County has over a hundred species which are divided

into three major families: flexible (most of the head was flexible and could be closed up), inaduate (most of the upper part of the crown is somewhat movable and the arms have large pinnules), and camerate (the crown or most of the head is solid, there isn't any movement between the plates of the crown). The arms are flexible and have many very fine pinnules and an anal tube or sac that rises above the arms to carry the waste away. This species had appendages with the true arms underneath. If a crinoid lost one of the appendages they had the ability to regrow them. I have a number of specimens showing the differences in the three types found in the bluff.

Each arm has a groove on the inside that carried food down to the mouth opening, as the arms waved. Most of the arms could be curled up or down and inward. The free floaters curl an arm or two around something to hold themselves in place while they feed or rest.

Crinoids have a straight stomach, and a highly developed nervous system. There is a thin skin covering, ligaments and muscles to hold the animal together. They grew by adding another section on the top of the stem at the base of the head. The stem is hollow to allow a plasma or their blood to flow to the roots.

Crinoids had some parasites living on them. Crinoids were the prey of some fish, starfish and sharks.

The fossil crinoids at the bluff had a symbiotic relationship with a *Platyceras* gastropod which fastened itself over the anal opening on some species, evidently eating the waste. A species of coral often anchored itself above the mud level on the stem. They may have helped stabilize the crinoid. Some of the other animals that lived with the crinoids were brachiopods, archimedes, finastels and more.

I have enjoyed collecting all of the crinoids, but my favorites are the juveniles, the young ones and the babies. They are more rare, and I do not know anyone else who collects them. Some of the ones I've collected are small as a pinhead. It takes magnification to really look at them.

Reference: *Echinodermata, Crawfordsville, Indiana Crinoid Studies* by Jan F. Van Sant and N. Gary Lane, 1964

*The Strata Data* (Oct., 1999)



### FOR FURTHER READING....

Rocks have been found in Malta which might have been carried to the surface from 770 kilometers deep. Researchers there are finding lots of new minerals which can form only at the intense pressures at the bottom of the lower mantle of the earth.

*Science* (Jan. 14, 2000)

Ever tried to clean a fossil from its matrix by hand? Those painstaking days may soon be over, as researchers continue to develop cutting lasers which could vaporize the matrix but stop when they encounter bone, leaving the fossil intact.

*New Scientist* (Nov. 6, 1999)

Japanese scientists have found what appears to be the remains of the oldest artificial structure, dating from half a million years ago. If confirmed, the two huts (postholes have been found) would have been built by *Homo erectus*. Thirty stone tools were also found in the location, seven within the pentagonal outlines of the huts.

*New Scientist* (Mar. 4, 2000)

Long thought to be chemically inert, diamonds do react with a compound called butadiene when placed in a vacuum at room temperature. The product of the reaction was cyclohexene. So, diamonds are no longer forever.

*New Scientist* (Feb. 26, 2000)

Australian authorities have jailed an aborigine who removed and tried to sell a dinosaur footprint. The aborigines attach great spiritual significance to such footprints, which made the theft a tribal crime as well as a legal matter for the state of Western Australia.

*Nature* (Mar. 2, 2000)

A University of Kansas paleontologist has found the nearly complete skeleton of a huge saber-toothed cat in a quarry in Florida. The Pleistocene critter roamed Florida in the early Pleistocene, and is the third species discovered in North America. *Xenosmilus* has a larger bite than the other two, and "would have had a more bearlike than catlike appearance," says the discoverer.

*New Scientist*, (Jan. 29, 2000)

Did the first Americans hoof it overland or come down the Pacific coastline? Some Canadian researchers have now mapped out a possible route which could have been open throughout the last ice age. The route is now underwater, since sea levels have risen by as much as 120 meters in the meantime. After mapping a route, the scientists did some underwater sleuthing, and found a 12,000-year-old pine stump and a 10,000-year-old stone tool in 53 meters of water.

*Science News* (Feb. 5, 2000)

Inclusions and isotope contents have made it possible to identify the sources of some of the world's prized gemstones. For example, an emerald in an earring found in France, dating to the Roman Empire, was mined in Pakistan centuries ago. Another emerald from the crown of King Louis IX of France (13th century) turned out to be from Austria.

*New Scientist* (Feb. 8, 2000)

The 1999 discovery of the hand and arm bones of *Australopithecus*, a probable human ancestor, has made it possible to assess the likenesses and differences from our own hand bones. The South African fossil bones (3.3 million years old) look more like present-day human hands than the hands of either present-day gorillas or chimpanzees.

*New Scientist* (Dec. 25, 2000)