THE ROCKFINDER

Joyce Larson, Editor
Michiana Gem & Mineral Society
144 Spruce Drive
Westville, IN 46391

FIRST CLASS MAIL

SCRIBE

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The MICHIANA GEM AND MINERAL SOCIETY, a non-profit organization, is affiliated with the MIDWEST FEDERATION OF MINERALOGICAL AND GEOLOGICAL SOCIETIES and with the AMERICAN FEDERATION OF MINERALOGICAL SOCIETIES.

Regular Meetings

Time: 2:00 p.m. EST
Fourth Sunday of each month
June - Field Trip meeting
July - No meeting
August - Annual Club Picnic
December - Date to be announced
Christmas Party

Place: Westminster Presbyterian Church
1501 W. Cleveland Road
South Bend, IN
West of the St. Joseph River

Dues

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

Rockfinder Staff

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Co-Editor.....	Margaret Heinek	7091 E. East Park Ln., New Carlisle, IN 46552
Staff.....	Bob Heinek/Club Members	

All contributions for publication should be in the hands of the Editor (219-785-4382) by the 10th of each month.

THE ROCKFINDER

VOLUME 32 NUMBER - 9 SEPTEMBER 1992
PUBLISHED BY: MICHIANA GEM AND MINERAL SOCIETY SOUTH BEND, IN

MEETING: September 27, 1992
Doors Open - 1:30 p.m.
Meeting - 2:00 p.m.

PLACE: Westminster Presbyterian Church
1505 W. Cleveland Road
South Bend, Indiana

PROGRAM: 30th Anniversary Special

BIRTHSTONE FOR SEPTEMBER - SAPPHIRE

Any one of the hard, transparent, colored varieties of corundum which when cut are used as gems: usually and specifically, the blue variety - a deep pure blue.

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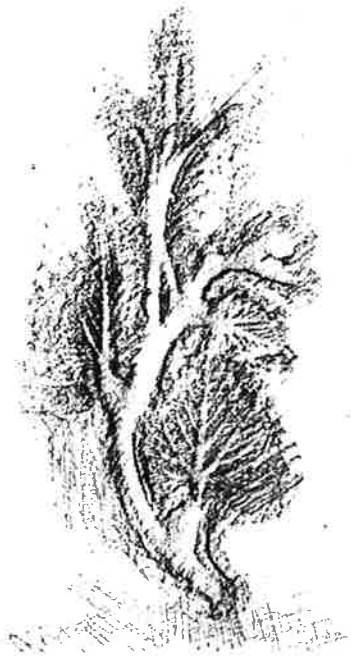
WELCOME NEW MEMBERS -

LeRoy Castle, Jr.
51211 Oakhill Court
Granger, IN 46530
Phone: 277-4939

Loretta C. Mileske
23700 Marquette Blvd. #50
South Bend, IN 46628
Phone: 289-6798

Paul Fields (Age 9)
Doretta Fields
50746 Mercury
Granger, IN 46530
Phone: 273-9036

Stanley Jacobs
9307 W. Pahs Road
Michigan City, IN 46360
Phone: 872-3849



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AND, TWO VALUED MEMBERS ARE HEADED WEST:

Joan Scherer and her daughter, Diane Bowman will be moving to the New Mexico-Arizona area during the week of 9-20. So much talent the west will be gaining and a big loss to our Club. We wish them both much happiness and success in their new venture. Stay in touch!

SPECIAL DAYS FOR THESE SEPT. FOLKS!

Happy Birthday to:

8 - Paul Stone
18 - Don Erb
19 - Gertrude Orrell
21 - Tom Fields
26 - Kenny Zeiger

Happy Anniversaries to:

1 - Pat & Tom McLaughlin
4 - Paul & Lorraine Crum
29 - Ozzie & Jo Kytta

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FACTS:

Take any number up to ten. Double it. Add four. Divide by two. Take away the original number. The number left will be two.

Multiply nine by any number except zero and the product equals nine when reduced to a single digit. For example, 9 x 2 = 18 and 1 + 8 = 9.

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MARGARET'S COLUMN

The annual show is over, and as usual it was a good one. The displays we had were really exceptional, but I had hoped to see more from the members. We had the new club cases there. We loaned 3 to outsiders, and Bob and I filled the other 3 because I dislike seeing empty cases. Where was your display?

We do not know how much we made, as some of our bills are not in yet. The Kiddies Wheel did real well. The Club Booth and Silent Auction were successful. I can tell you the Boulder Opal necklace, donated by John Scott, which we auctioned made $200.00 for the club. There were some other very nice items given by the dealers for door prizes.

I have received several suggestions on what we might do to perhaps improve our show. One was to get away from the Labor Day Weekend - there are so many festivals in the area. What do you think? What date(s) would you suggest? Are you satisfied with the Century Center as our show site? I dislike having to pay for parking, but this is something we must put up with.

We have several new members: WELCOME - Loretta Mileska, LeRoy Castle, Jr., Doretta Fields and son, Paul (9 yr. old) & Stanley Jacobs. We hope to see you at the meetings.

This year is the Society's 30th anniversary and we will be celebrating with a Birthday Party on September 27th, our regular meeting day. So please come!

The club will have a bus trip on October 4, 1992 to the Geology Center, Chelsea, Michigan. This will be a one day trip, leaving from the bank on the corner of US 31/33 and Cleveland Rd., South Bend, IN at 6:30 a.m. We will return about 6:30 p.m. We will "brown bag" for lunch, but will stop on the way home for supper. Michigan and Indiana are still on different times which causes us to leave so early. I must know how many will plan on going, so PLEASE LET ME KNOW SOON! Reservations will have to be on a "first come, first served basis". There is room on the bus for 41 people. I want to fill the bus, which will make the cost per person less. Look for the flier on the center in this ROCKFINDER. There will be a sign-up sheet at the meeting. If you worked at the show, some of your fare will be picked up by the club.

A dealer at this year's show, Mr. Osterberger, who is familiar with the coal area around Pit 11 in Illinois, told me he would give us a name to contact to plan a field trip there. This is a well-known area for collecting fern fossils. I will try to contact them, and plan a trip this fall before it gets too late and too cold. Interested?

Margaret

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BIRTHSTONE PUZZLE - Hidden in this puzzle are the names of the monthly birthstones. Find them by reading forward, backward, up, down or diagonally.

Garnet	Ruby	Amethyst
Peridot	Pearl	Aquamarine
Sapphire	Diamond	Turquoise
Diamond	Opal	Topaz

E	D	R	N	O	T	E	N	R	A	G
S	L	P	O	A	U	Q	S	A	Q	U
D	A	I	F	L	R	A	E	P	U	D
S	R	P	C	L	Q	U	M	O	A	N
R	E	O	P	Z	U	V	B	A	M	O
O	M	E	A	H	O	R	I	Y	A	M
I	E	P	L	U	I	P	S	D	R	A
P	O	R	I	U	S	R	A	O	I	I
T	O	D	I	R	E	P	E	L	N	D
S	A	M	E	T	H	Y	S	T	E	O

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WINTER FORECAST?? "Onion skin is very thin,
Mild winter is coming in.
Onion skin is thick & tough,
Winter will be cold & rough".
(Better check your onions)
(-from Weather Lore)

ABLE TO LIFT TALL BUILDINGS

One of the buildings of the General Electric Laboratory at Nela Park, near Cleveland, Ohio, was built upon a layer of iron pyrite. When the mineral was exposed to air, it began to oxidize into rust. This rust was created at such a rate that the basement floors were lifted fifteen inches in fifteen years - an inch per year! The rust occupies more space than the pyrite and the chemical action taking place has enough power to lift a building. (-via The Petrified Digest, Kiskigem Journal, The Rock Rattler)

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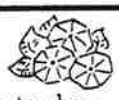
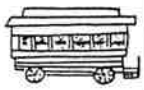
September

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
 September stone is the sapphire	 September flower is the morning glory	1  Liberty Bell arrived in Philadelphia, 1752	2  Treasury Dept. established, 1789	3  Henry Hudson discovered Manhattan, 1609	4  Roll-film camera patented, 1888	5  First Labor Day parade in New York, 1882
6  Harlem Globetrotters created, 1927	7  Labor Day	8  Hurricane hit Galveston, Texas, 1900	9  Colonies given name "United States," 1776	10  National Piano Month	11  First streetcar operated, 1910	12  Jesse Owens born, 1913
13  First rhinoceros exhibited in U.S., 1826	14  First solo balloon crossing of Atlantic, 1984	15  Prince Henry of England born, 1984	16  Oklahoma Territory opened to settlers, 1893	17  San Francisco founded, 1776	18  Washington laid Capitol cornerstone, 1793	19  Mickey Mouse makes first cartoon appearance, 1928
20 Alexander the Great born, 356 B.C.	21 First daily newspaper in U.S. published, 1874	22 Autumn begins tomorrow	23 Planet Neptune discovered, 1846	24  Supreme Court established, 1789	25  Yosemite National Park created, 1890	26  Composer George Gershwin born, 1898
27 First English passenger train began service, 1825	28 Rosh Hashanah	29 Scotland Yard established, 1829	30 First atomic submarine commissioned, 1954			

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I'll fill you in on my summer in the October - Rockfinder. Briefly, since July - a trip to Mammoth Cave, KY; Hot Springs, Arkansas to dig for crystals - a surprising sudden bout with lobar pneumonia and last but not least - running over a hornet's nest with the lawnmower this past weekend - yep, they got me - came out in a swarm - I lost track of the stings. Well - they are all dead now - I got even!!! Your editor - Joyce

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SINGING WHILE YOU DRIVE - at 55 mph - sing "Highways are Happy Ways"
at 65 mph - sing "I'm but a stranger here, Heaven is My Home"
at 70 mph - sing "Nearer My God to Thee"
at 75 mph - sing "When the Roll is Called Up Yonder, I'll be There"
at 80 mph - sing "Lord, I'm Coming Home"
(-via The Rock-A-Teer, Stoneage News & Rockhound Rumblings)

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When you feel you're at the end of the rope-tie a knot and hold on!

A friend is one who comes to you when all others leave.

You can only make one first impression. (-from Advice-Southern Style)

A VISIT TO THE GREAT NORTHWEST

My family was on the move again. When I decided to visit daughter Margaret in Washington State my two older daughters & a son-in-law thought it was such a good idea that they invit themselves along. There has to be some Hungarian Gypsy in our genes. Margaret and her husband, John, said to come ahead as they had plenty of room and several sleeping bags. By virtue of being the "Mother" I got my own room and bed.

We all arrived in Portland on the same day--but on different flights. Pat & Tom arrived from South Bend first, my plane came in second and Marilyn flew in on the late afternoon flight from South Carolina. My granddaughter Beth, Margaret and John met the flights and the fun started.

The first night was spent sightseeing downtown Portland and, of course, a seafood dinner at John's favorite restaurant. My grown daughters deported themselves like teen-agers while Tom, John, Beth and I tried to pretend we weren't with them.

Early the next day, Pat and Tom left for Seattle after we took a tour through a Monastery that was perched on top of a cliff overlooking Portland. The view from the glassed in Meditation Building was spectacular. Beth lives in Portland and couldn't join us as she had to be at work. Margaret, John, Marilyn and I then drove up to Packwood, Washington, to Margaret and John's home. We decided to take the trip there by following the Columbia River Gorge part of the way.

The Gorge is beautiful and we stopped at many "view areas" along the way. Lacy waterfalls, sheer cliffs and overgrown islands mark the course of the river, along with a beautiful view of the mountains and mammoth dams, locks and bridges. The Columbia starts in the snowfields and glaciers of the Canadian Rockies and flows for hundreds of miles before it joins the Pend Oreille and Snake Rivers. During the Miocene Epoch the low-rolling hills of the River valleys were rent by enormous fissures where lava flowed out to depths of 100 to 200 feet thicknesses. Huge ice dams were formed by glaciers during the last ice age, 13,000 to 20,000 years ago. These "ice dams" tended to float when the water behind them became deep and the results were catastrophic floods.

The greatest flood is known as the "Spokane Flood" which originated in Idaho and swept across the lava plains of eastern and central Washington to the Pacific Ocean through the Portland area. The floodwaters came from the glacial Lake Missoula, which covered most of Idaho and western Montana. The glacial dam collapsed and created a flood that discharged Lake Missoula in just about two days. This discharge was about ten times the present combined discharge of all the great rivers of the world. Many such floods of lesser strength took place due to these ice dams and caused much erosion. One such area that is now agriculturally sterile is known as the scablands, mesas or tablelands of lava left exposed and stripped of earth. The result is an area that looks like a moonscape. These many floods did do wonderful things to the Portland area though. The rich earth they swept down makes Portland an area of fertile farmland.

The Columbia today is gently flowing due to the many dams along it, the amount of concrete in the Grand Coulee Dam alone would pave Texas. We watched sail boats and wind surfers skitter up and down the River like bright giant butterflies. Unfortunately, man has done other things to the Columbia, pollution and radioactivity has damaged the ecology and no longer do thousands of Salmon come up river to their old spawning grounds. As the Columbia drains 259,000 square miles of land from seven states, it is a shame we don't take better care of this natural resource.

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We left the Columbia River and crossed the Bonneville Dam to make our way to Packwood. Margaret is the Manager of the Forestry Service station there and John is its computer expert. We drove through miles of forests that crowded the highway. Every once in a while we would get a glimpse of a mountain peak in the distance. It grew dark before we arrived and that ended the sightseeing for the day.

Early the next morning we were treated to a wonderous sight. From Margaret's front yard we could see the sun shining on the glacial top of Mt. Rainier. Mt. Rainer is located in the High Cascades which is part of the great "Ring of Fire" that encircles the Pacific and includes such volcanos as Krakatoa, Fuji and Shasta, Hood, St. Helens, Adams, Baker and several others. These peaks are solitary and many are ice bound. The cones formed long after the rise of the Cascade Range, sometime in the last several million years. All of the cones of the Cascades are composite volcanos, with the exception of Lassen, which is a plug-dome volcano. A composite volcano is formed layer by layer, as lava and explosion fragments settle on the sides of a developing cone. Mt. Rainier was observed in eruption at least 14 different times between 1820 and 1894. As I stood there and gazed at the seemingly serene Mt. Rainier, I couldn't help but think about the awesome and terrible energy that lay beneath its ice-covered dome.

Margaret then took Marilyn and I to the Forestry Office. She is in charge of thousands of square miles of forest lands in the Packwood area. We were introduced to the many diversified jobs that the Forestry Department does to protect the government owned public lands in the area. Not only is Forestry responsible for the many parks in the area but also the maintenance of roads and bridges. It is also Forestry's responsibility to decide what land can be logged and to keep a close check on whether the logging companies are following guide-lines set up by the government. After an area is logged, the Forestry Service is responsible for making sure the logging companies have replanted the logged-out areas. These are only a few things that the Forestry Service is accountable for and as I toured the office and watched my daughter meet with her staff I was overwhelmed by her competence as a anager. Needless to say, I was a proud parent.

Another day was spent on a grocery shopping trip to Yakima. It is 68 miles from Packwood and the nearest "big" city. The drive down into Yakima took us over several large mountain crests with drops of 4,000 feet. We stopped to see water falls that cascaded down the sheer cliffs and passed several kettle hole lakes and one big crystal clear cirque lake. Margaret explained that the kettle hole lakes were formed by the melting of a buried block of glacial ice. Cirque lakes are formed by moving ice and can be very deep. We stopped to look at a rock outcrop along the road where Margaret pointed out the linear, finely cut parallel scratches on the rock surface made by debris carried in the ice of a moving glacier.

She also explained to us why some of the rivers and streams we passed were clear and the Cowlitz River that flows by her house had swiftly flowing water that looked a cement grey. The Cowlitz is partially fed by glacial run-off. The glacial melt is full of fine sands, silt and debris that has accumulated at the base of the glacier from the deposits it has picked up in its journey. During the summer season when glacier melting is at its zenith, the finer sands and silts are carried in the melt-off. This so called "rock flour" produced by glacial abrasion supposedly makes "Glacier Milk", grey in the case of the Mt. Rainer glacier because of the color of the rocks it had ground up.

We came out of the mountains and reached the high desert area of Yakima. Orchards as far as the eye could see and all the trees heavy with fruit. Cherry, peach, apricot, apple, and pear trees along with blueberry patches and farms that grew nothing but flowers. Irrigation ditches abound as the area is semi-arid but with very fertile soil. After shopping we visited the Yakima Indian Museum and were entranced with the history of the Yakima tribes.

continued page 6.....

Back in Packwood we spent several days just driving to the many different parks and recreation areas. On Sunday, John asked if Marilyn and I would like to take a small 4-seater plane on a flight over Mt. St. Helens. He didn't have to ask twice and we were soon strapped into our plane seats, I got to sit in front with the pilot while Marilyn cowered in the back with a death grip on John. Up, up and away we went!

We had a wonderful view of Mt. Adams, another glacier-topped volcano that is near Mt. Ranier. Soon Mt. St. Helens was in sight. The region around the volcano was completely devastated for miles. Spirit Lake was half covered with dead logs that floated back and forth, according to the winds. Dead trees lay like scattered match sticks all over the ground. As we approached the center of the new crater we could see the growing dome in the middle of it sending off puffs of steam into the cold mountain air. I sadly thought of a woman I had met in Yuma, Arizona, whose mother and step-father had perished in the eruption. They, like the 56 other people who died, thought they were in the "safe zone". It was truly awesome to see what nature is capable of doing.

I found the plane trip back to Packwood very exciting as the pilot let me fly it for several minutes. It would have been even more enjoyable if Marilyn would have stopped whimpering while I flew it. Several days later we drove up to Mt. St. Helens and we were amazed to see plants growing in the pumice and ash. The mountain was busy rejuvenating itself.

We made another trip to a small "rain forest" where the ground quaked under our feet. Moss of all kinds dripped from the trees. In fact, every surface was covered with ferms, lichens, mosses, foamflowers and liverworts. I felt like I was on a jungle safari. It was hard to believe that we were just a few miles from the snow-capped Mt. Rainier.

Pat, Tom, Marilyn & I spent another day searching out three wonderful hot springs that Margaret told us about. What a delight when we found them as they were large pools of water that had three temperature zones. One was hot, one warm and one tepid. The water flowed out of the rock cliff by the side of the pools and, after testing the temperature, we went wading. It was a beautiful area as a rushing, ice cold mountain stream flowed right next to them. The whole region is dotted with these springs, heated by magma far below the surface of the earth. These hot springs spawn from the many active volcanos along the "Ring of Fire" zone. The "hot pool" was milky blue in color as it was saturated with minerals that leached out from the rocks far below. It was interesting to learn from Margaret that Klamath Falls, Oregon, utilized its hot springs for their geothermal energy. The steam they generated produced electricity for the city. As for us, we were just sorry that we didn't have our bathing suits along for this trip.

The visit wouldn't have been complete without a drive to Mt. Ranier & a walk up to the glacier. We drove to Paradise and the visitors center, then took one of the many paths that led up to the snow fields. The flowers in the meadows beneath the glacier were in full bloom. I sat on a bench and watched several deer come to within a few feet of me. A grouse ran across the path in front of me and brilliant bluejays flew overhead. The sky was clear and the mountain air free from pollution. I didn't walk up to the snow fields as I was perfectly content to just sit and enjoy these most beautiful sights. It is truly one of God's perfect spots.

My trip to Washington was wonderful, I hated to see it end. But, I have a feeling that Margaret and John might be greeting more members of my "Gypsy" family soon. Several grandchildren have now expressed an interest in visiting them, they liked what they heard about our adventures.

By - Catherine McHugh and Marilyn Meier, Club Members

Editors comments - continued page 7.....

Thanks to both of you for sending this article in for all of us to enjoy. As you will note in one of the Rockfinder previous issues - I also found this part of the Northwest to be the most beautiful part of the USA I have ever been to. I hope to go back to that area myself - only next time I want to spend "more time". I couldn't change a word that you sent in - just hope you don't mind my retyping it. You see the typewriter I use has a smaller type and I wanted to have your entire adventure in this issue. One question that I do have- did anybody take slide pictures that we could show in an upcoming meeting? WHAT A TRIP!!!

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And - two other club members were in Seattle this summer, Sisters Georgia Costin and Jeanne Finske. Sister Jeanne told me about the tug boat moving a ship - the tug boat's name? U.S.S. Mishawaka!

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A motorist and his wife drove for miles in silence after a terrible argument in which neither one would budge. The husband finally pointed to a mule in a pasture. "Relative of yours?" he asked. "Yes", she replied, "by way of marriage."
(-via The Glacial Drifter)

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NEW BOOKS IN THE MICHIANA GEM AND MINERAL SOCIETY LIBRARY

#177 - Faceting for Amateurs - by Glenn & Martha Vargas - 3rd Edition, 1989 Desert Printing Co., Indio, CA - from Lapidary Journal - 340 pp/$30.00 A complete book on faceting, covering all aspects of the craft.

#181 - The Reign of the Reptiles - by Michael J. Benton, Ph.D - Crescent Books, N.Y. 1990 $5.95/144 pp. The rise and decline of this great group, plus an introduction of the early beginnings of life on earth, and theories on the great extinctions.

#182 - Geology of Michigan - by John A. Dorr, Jr. & Donald F. Exchman. The Univ. of Michigan Press, Ann Arbor. 1990 edition - $24.95. Identifies and describes the principal geological evolution of the State. Emphasis is placed on the geological significance of the scenic attractions to be found in different areas of Michigan.

#183 - Ohio Fossils - by Aurele LaRocque & Mildred Fisher Marple - State of Ohio, Dept. of Natural Resources, Div. of Geological Survey - 13th printing, 1990/$6.25 Bulletin #54, Columbus, Ohio. A comprehensive bulletin of 152 pages, showing the geological formations of the state, the types of fossils to be found in each, drawings of the fossils, identification aids, and localities where the fossils may be found.

#184 - Fossil Identifier - by Scott Weidensaul-Mallard Press, N.Y. 80 pp/$3.99. 100 of the most common plant and animal fossils, invertebrates, and a discussion of how fossils formed and how to collect them.

#185 - The Mineralogy of Michigan - by E. Wm. Heirich - Bulletin #6, Michigan Dept. of Natural Resources, Geological Survey Division, 1976/$6.00. This book was written to acquaint the layman mineral collector with the geological characteristics of the types of mineral deposits in Michigan and to describe the significant mineral occurences in the state. Each rock or mineral is described, with localities where they may be found.

#186 - The Lake Superior Agate - by Scott F. Wolter - Gift to the club by F & L Minerals. 1986-103 pp - Lake Superior Agate Corp. This author has gone into mining and selling Lake Superior Agates, so he has a special interest in promoting these beautiful stones and minerals. He explains how they were formed and where they can be found, and illustrates rough and polished specimens.

Paul B. Godollei, Michigana Gem & Mineral Society Librarian

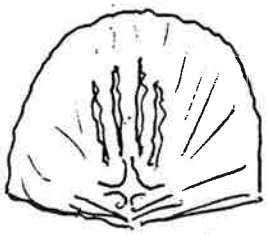
FOSSIL COLLECTING IN INDIANA - by Paul B. Godollei, Club Member

I had an opportunity to collect Ordocician fossils on the way back from a reunion in Cincinnati on July 27 of this year, by taking Route 27 from Oxford, Ohio and stopping along a stream bed near Lotus and road cuts near Liberty and near the Whitewater River on Route 44 before getting to Connersville. The Route 252 through Brookville would have been even better for collecting Upper Ordovician fossils in the Richmond Formation. The Lower Whitewater Member and the Liberty Member are noted for fine brachiopod specimens, including Platystrophia, Sowerbyella, Strophomena and Hebertella. Some nice Pelycepods may also be found, including Ishyrodonta and Byssonchia. Sometimes a nice trilobite like Isotelus may be located at the top of the Waynesville Formation, which is called the Blanchester Member in some publications and is just below the Liberty Member.

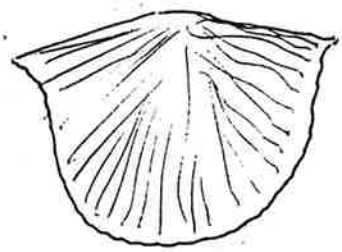
The shale turns to blocky limestone at this point. Some nice Leptaena richmondensis brachiopods with wavy wrinkled shells may also be found in this zone. At the top of the Whitewater, the mixed limestone and shale may yield some large cephalopods. I found several nice ones near Hamilton, Ohio a few years ago.

Among the specimens I collected were several nice Hiccobecus capax, (Lepidocyclus), a small nut-shaped brachiopod, a small cephalopod, Orthonybyoceras, several cup corals, Grewingkia canadensis, some small Strophomena brachiopods, and a very nice Tetraphalerella neglecta brachiopod, a couple of Strophomena vetusa specimens with their characteristic 4 parallel ridges on the inside of the brachial valve completed the collecting for the day.

Bibliography: Cincinnati Fossils, Edited by R. A. Davis,
Cincinnati Museum of Natural History, 1985 - Publication No. 10, $4.75

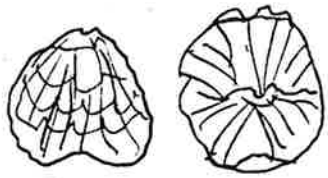


Strophomena Vetusa Interior

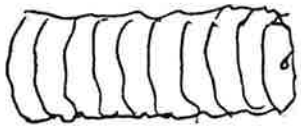


Tetraphalerella Neglecta

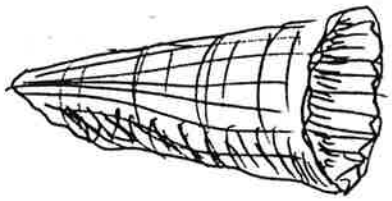
Leptaena richmondensis



Hiscobecus capax



Orthonybyoceras....



Grewingkia .....canadensis

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KEEPING AN EYE ON EARTH: Each day, signs of environmental distress are easy to spot - an oil spill on the beach, the haze hanging over the L.A. Basin. But some of the worst damage takes place in tiny processes that are invisible to the eye, relentless assaults on the way the planet is supposed to work. ASSAULT ON THE AIR: Earth's atmosphere is threatened on two major fronts. Chlorofluorocarbons (CFSs) are thinning the ozone that protects the planet from harmful sunlight. This raises the risks of cataracts & skin cancer & damages marine life at the most minute level. At the same time, excessive carbon dioxide, produced by the burning of fossil fuels & forests, may trap the Earth's heat at dangerous levels. Such a phenomenon threatens to raise ocean levels, change weather patterns & alter habitats. GLOBAL WARMING: (A) Carbon dioxide, methane, nitrous oxide & chlorofluorocarbon gases from autos, factories & other sources are released into the atmosphere where they form a barrier that traps heat. (B) Sunlight is able to pass through the barrier & warm the Earth, but the resulting heat is unable to escape back into space. (C) The resulting "greenhouse" warming is expected to shift prime agricultural regions northward, melt the polar ice caps & cause sharp changes in weather patterns. (-via Flint Flashes - condensed)