

THE ROCKFINDER

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



THE ROCKFINDER

JUNE, 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.

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 Yearly Membership Dues (Payable by January 1)
 _____ Individual \$10.00 per year
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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.

 Additional names:
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 Birthday _____

Name _____
 Birthday _____

Date of Wedding Anniversary _____

Phone _____

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 40, Number 6

June, 2000

JUNE 25th FIELD TRIP

David Peltz notified us that he has asked for permission for the club members to hunt for fossils at several places in or around South Bend and Mishawaka for Sunday, June 25.

One spot he recommended is near Kohl's parking lot: a graded field on the corner of North Main and Day. David said we should park at the south edge of the parking lot and walk out into the field. David reported this is the area where he had found his largest crinoid.

For another area, turn east on Auten Road off old 31/33 and drive past Ironwood to where the road turns to the south to a housing project called Summer Hills. This is a good hunting area.

He also suggested hunting at the old Riley High School lot at Ewing and Fellows. I understand a lot of fill has been brought in and contains fossils.

How about meeting at Kohl's Parking lot at 1:30 and we can look as a group. If you want to hunt in the other areas, you can.

July Birthdays

12 Louis Jordan, Jr.
18 Nick Pellus
19 Dewey Hassler
24 Elma Heynssens
28 Pat McLaughlin
29 Matt Brueske

Anniversaries

1 John & Margie Hawkins
6 Jim & Barbara McHugh
20 Dewey & Nina Hassler
31 Leroy & Mary Castle
31 Bob & Margaret Heinek

August Birthdays

1 Robin Schuster
1 Sherrie Russell
10 Don Church
13 Todd Miller
16 William Clark
17 Betty Stout
20 Chelsea Matson
21 Larry Hess
23 David Peltz
24 Rebecca Parker
26 Sister Georgia Costin
27 Phyllis Smallwood

Anniversaries

4 Ed & Marsha Miller
12 Hal & Bonnie Brueske
26 Jim & Sherrie Russell



UP AND COMING

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)

July 28-30: Richland Lithic and Lapidary Society, Kingwood Center, Mansfield, OH.

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

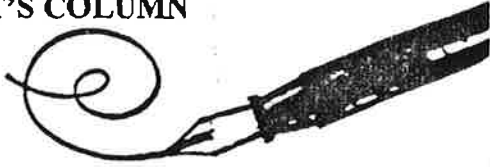
August 27: Grand Old Picnic of the Michiana Gem & Mineral Society, Don & Yvonne Church's house, Sturgis, MI.

September 1-3: Michiana Gem & Mineral Society Show, Century Center, South Bend, IN.

September 15-16: Tulip City Gem & Mineral Club show, Holland Civic Center, Holland, MI.

October 20-22: Three Rivers Gem & Mineral Society show, Allen County Fairgrounds, Fort Wayne, IN.

MARGARET'S COLUMN



This will be the last *Rockfinder* before our show in September. There will be a reminder of our annual picnic, so now is the time to remind you about working at the show, displaying, set up/take down, demonstrating, helping at the silent auction, and helping at the Kiddies Korner.

Bob Miller will be contacting members to see if they will demonstrate: Tom Noe will ask for workers at the Silent Auction; Bob Heinek will ask for help in marking the floor for the dealers (on Thursday evening); Kathy Miller will need workers at the door and we need a lot of helpers and stones, with descriptions, for the Kiddies Korner.

You missed a grand auction in LaPorte on Saturday and Sunday, June 3 & 4, if you did not attend. I have never seen as many museum pieces that were bought by rockhounds and people interested in bidding. Several members were there and we were successful in getting some good items. Bob and I went on Thursday and Friday to help the auction people separate the good and extra good items and place them on the tables so the bidding could take place on Sunday. The Saturday bidding was for furniture, books, VCR tapes, pictures and household items. The Sunday auction was for boxes and boxes of rock, big specimens, jewelry, records, books and display cases. Bob and I left at 4 PM and they had not started on the display cases, boxes of records, rugs, furniture and lots of other items. I took pictures to show what was offered.

Remember the picnic, and if we could car-pool it would be nice. If anyone wants a ride let us know, and we will hook you up with someone who will be willing to take riders. Let's make this a big affair, and I know you will enjoy being at Don and Yvonne Church's home. Take a dish to share, your silverware, dishes and appetite. Don will have the meat and rolls; he is a good cook!

See you on Sunday, August 25. Let's hope it does not rain that day or a day or so before so it will not be muddy, but if it is, wear old shoes.

LETTER FROM GORDON DOBECKI

Dear Margaret & Robert,

It's been nice getting the newsletter. It keeps me up to date on all the club's activities. The field trip in September sounds great. I belong to the rock club up here at Grants Pass but haven't been to too many meetings since it is during the week & in the evening. My hearing has been pretty bad lately, even with a hearing aid...this is especially true in a hall when several people are talking.

My treatments in L.A. have taken up about a quarter to one-third of my time since the first of February. They inject a vaccine after making an incision in my foot. So far I've had 6 operations. L.A. is the pits with the exception of the museums. I've been to the Natural History Museum 3 times (I know how to get there). The last time they had an exhibit of all the exceptional gemcarvers—boxmakers—and jewelers. It was great. Besides they have faceted stones that make Chicago's look like pebbles.

The last time I went for my treatment I stopped off in Yosemite. I camped & woke up at 5:30 to get into the valley early. I practically had Yosemite Falls etc. to myself for 2 hours before the hordes arrived.

My doctor put me back on a 2 week treatment interval. Luckily I had clothes & supplies so I camped & hiked Zion - Bryce -Glen Canyon etc. for 10 days before returning to L.A.

In Escalante, Utah, 3 miles north toward Boulder, there is a huge roadside project (right side, not public land). Those who carve or make boxes would love the deposit of multicolored alabaster, solid chunks as big as you can lift. You can collect a truckfull in a couple of hours. No walking. No kidding. The stuff takes an excellent polish with Zam on muslin. Anyone who wants details can call me.

Your friend, Gordon



MINUTES OF THE MAY MEETING

President Margaret Heinek called the meeting to order at 2:00 p.m. Eighteen club members were present.

Refreshments were provided by David and Sally Peltz and Phyllis Luckert, who served a vegetable tray and cakes from a spring-decorated table, highlighted by some pink silk tulips. Sally reported that a get-well card was sent to Sister Georgia, who is recovering from surgery. We all wish her our very best.

Kathy Miller reported on a large rock auction that will take place the weekend of June 3 and 4 at the county fairgrounds in LaPorte. She passed around some photos of the collection, along with a notebook provided by the family of the man who formed the collection, listing some of his purchases. Margaret noted that he had collected only the very best, and several club members indicated that they would be at the auction. Kathy also passed around several flyers with information on other rockhound activities in the area, including the Rockhound Seminar at Roscommon, MI, and the Bloomington Swap.

Tom Noe made a motion to approve the minutes of the March meeting as printed in the April *Rockfinder*; David Peltz seconded and it was approved unanimously. Bob Heinek gave the treasurer's report and it will be filed for audit.

Tom made a motion to put together a flyer about rockhounding and fossil collecting in Michiana, which could be handed out at the shows and give some publicity to the club. This motion was seconded and approved, and Tom will start working on the flyer.

Under new business, Tom also suggested that members write articles for the *Rockfinder*. Articles from club members are always welcome.

The August 27 picnic will be held at Don and Yvonne Church's home in Sturgis, MI. We decided to reimburse Don for the cost of the hamburgers when he finds out what the cost is. Details of the picnic and nap will be included in the June *Rockfinder*.

Herb Luckert reported on the current status of the DNR regulations about collecting on recreation lands in Indiana. He got this information on a recent field trip. The new rules are being interpreted this

way: you may collect on state lands as long as you give all the items to the Indiana State Museum.

Margaret offered copies of two books for sale to club members at reduced rates: *Roadside Geology of Indiana* and *Geology Underfoot in Illinois*. The club purchased these books at a discount and will sell them at cost to the members who want them. (Please contact Margaret if you are interested.) Leftover books will be sold at the show at the retail price.

Door prizes: Emily Johnson won the woman's bracelet which had been donated to the club by the wire-wrapping demonstrator at a previous club meeting. Phyllis, Kathy and Kurt Hoffman won apache tears. Tom McLaughlin and Bob Miller also won door prizes.

Displays: David Peltz brought some of his recent finds from the Warsaw area and the South Bend area. The Luckerts brought fossils from their recent field trip to southern Indiana. Bob Heinek brought some specimens from South Carolina. Kurt Hoffman showed a rock with several possible fossils embedded in it.

Members enjoyed refreshments while viewing a film on mining which Don brought in.

Submitted by Gladys Pacholke, Secretary



September Birthdays

7 Janet Pellus
17 Ruth Amos
21 Tom Fields
21 Marsha Miller

Anniversaries

1 Tom & Pat McLaughlin
9 Herb & Phyllis Luckert

DEADLINE APPROACHETH!

Kathy Miller needs to know by June 25 whether you are going on the club field trip to Grand Rapids in September. If you haven't yet made your decision, make it now. Kathy has to get the deposits to the motel in July. Consult last month's *Rockfinder* for a description of the trip or call Kathy at 291-0332. This should be a great trip and everybody should have a wonderful time, with lots of specimens to show for your efforts.

Contact Kathy by June 25!



PICNIC PICNIC PICNIC

All club members are cordially invited to Don and Yvonne Church's home in Sturgis, Michigan, on August 27. This is the annual club picnic, and a great opportunity to catch up on news with other members and marvel at a few prize finds from vacation trips. The picnic will start officially at 1 p.m. Michigan time (noon Indiana time). Don and Yvonne live right on Highway M66 north of Sturgis.

Directions: Take the toll road to the LaGrange exit, which is Indiana 9. Go north through Sturgis (Indiana 9 becomes M66) for a total of about 7 miles. The number is 65036 M66, and there is a pair of twin gates in the driveway to help you locate the house.

Or, alternately, you can take U.S. 12 east in Michigan until you get to M66, then go 4 miles north to the house.

Bring your own place settings, tablecloths and a dish to pass. The club will spring for the meat (hamburgers, etc.). Drinks will also be provided. Don says they'll be there all day, so if people want to come up early to visit, feel free.

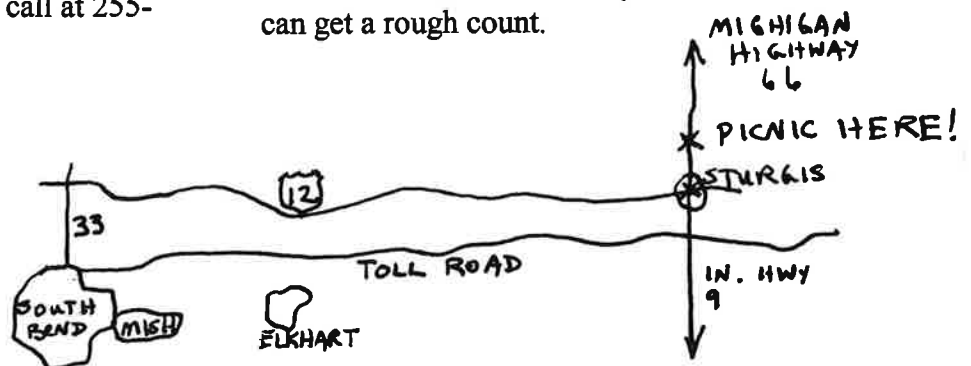
Mark this on your calendar, and about 2 weeks before the picnic please call Margaret at 654-3673 and let her know how many will be coming, so we can get a rough count.

FOR SALE

A woman in Elkhart has about 11 boxes of lapidary items for sale. She would like to sell them all together, but she'll also consider large groupings. These are all items that came from show purchases, and they look like what you find at one of our shows. Included are many examples of donuts, cameos, shells, mineral specimens, belt buckles, jewelry items of all sorts, polished slabs, geodes, tumbled stones, cabs (picture jasper, agate, malachite, turquoise and many other types) and some Indian-type reproductions (knives, tomahawks). No rough or equipment. Some of the specimens have become separated from their cards, so some assembly may be required. If you're interested (there really is a lot of material here), call Judy at 219-264-3626. She doesn't know anything about rocks herself, so you would need to look at the items personally.

EQUIPMENT FOR SALE

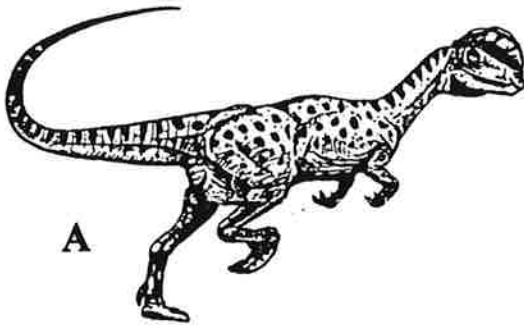
A woman in Mishawaka, Mrs. Clyde Bawcum, has a tumbler and grinder and a box of rocks for sale. She couldn't give any better description because the items are in a shed and they were used by her late husband. If you're interested, give her a call at 255-8171.



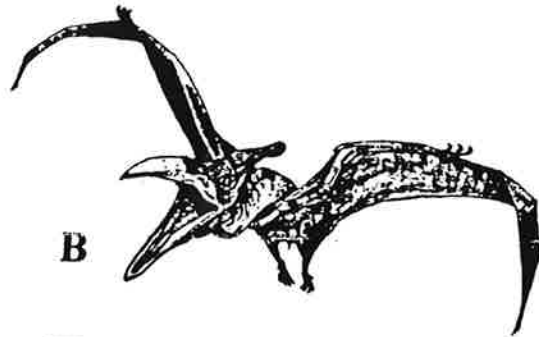
Youth Notes

By Kay Jurgens

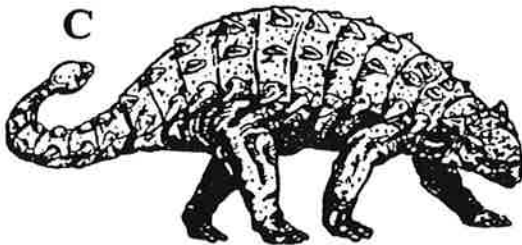
- ___ Ankylosaurus- A walking tank with a horned helmet, a plant-eater.
 - ___ Dilophosaurus- had a large head topped with a set of two curving crests.
 - ___ Hypsilophodon- had long, arched claws, powerful legs and a long rigid tail.
 - ___ Iguanodon- This plant-eater had hands with four fingers and a spike-like thumb.
 - ___ Procompsognathus- had a very light build, long legs, and could probably run fast.
 - ___ Pteranodon- A flying creature with a toothless beak, crest on its head and no tail.
- (This one was really hard, right?)



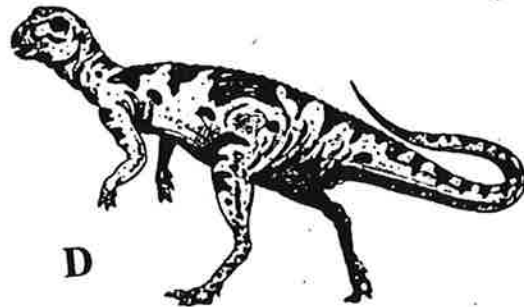
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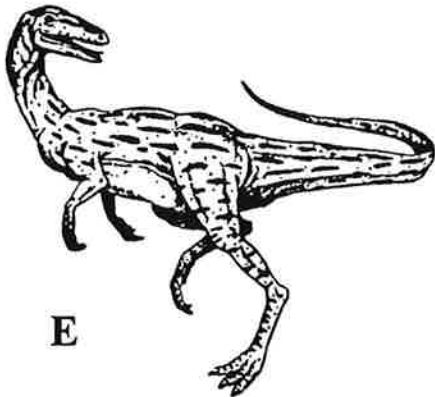
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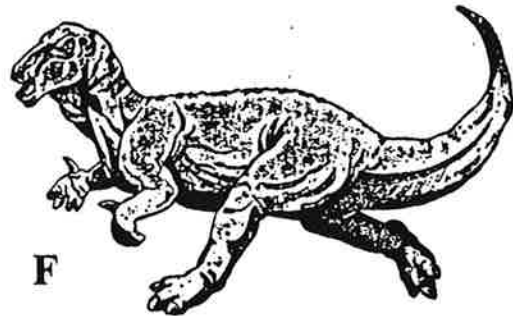
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Answers on Page 6.

THE PICK & SHOVEL
May, 2000

PYRITE AND MARCASITE DECOMPOSITION

Are you suffering from tired blood? Oh, wait a minute...this is a rock forum. Are your pyrite or marcasite specimens decomposing?

The following is an excerpt from a report on a talk by Frank Howie of the Geological Society (UK), March 5, 1984, about unstable minerals.

“Under appropriate conditions many, but not all, pyrite and marcasite specimens will decompose into a gray or white powder and sulfuric acid. This not only leads to the loss of the specimen but can damage cabinets and affect nearby specimens by the release of acid.

“The process of decomposition is oxidation. FeS_2 oxidizes to ferrous sulfate and sulfuric acid, and further oxidation changes the sulfate and some acid to ferric sulfate and H_2O .”

It has been held that bacterial action is necessary for oxidation of the sulfide to occur under normal environmental conditions. Frank Howie has investigated the chemistry of this process over a number of years and has conducted many controlled experiments. He concludes that bacterial action plays no part at all, so antibacterial treatment of specimens is useless.

The essential condition is exposure to air at high relative humidity (RH). At RH of less than about 50%, very little decay of pyrite occurs. At about 55% RH, the rate rises rapidly and continues to increase as RH rises toward 100%.

Some pyrite appears to resist the attack when all around disintegrate. Scanning electron microscopy has shown that the attack starts in regions having microcrystalline structure. If the specimen has crystallite size in excess of about 10 μm , the crystallites are angular and closely packed. Below 1 μm the crystallites are rounded with open interstices, giving a microporous structure. This acts like a sponge and provides a path for the moisture ingress and the start of the decay process, a process that is initiated by electrolysis.

Similar decomposition occurs in many other sulfides, e.g., arsenopyrite, realgar, chalcocite, stibnite and argentite.

The remedy is to keep the specimens in an RH maintained below 50%. This is generally achieved

most of the time in a cabinet having close-fitting doors situated in a living-room environment. To ensure full time protection, the use of silica gel as a desiccator is suggested (kept with the specimen in a sealed glass vessel, e.g., an inverted coffee jar). It is also possible to use humidity indicators—paper strips that turn blue progressively along the length as the humidity increases. These can warn of potential problems.

Often, specimens have surface blemishes caused by the presence of iron oxide. In the case of iron sulfide and pyritized fossils, this oxide can be the result of incipient sulfide decomposition. Ammonia was often used as a cleaning agent, but Frank Howie now strongly recommends a 1% to 2% solution of ethanolamine thioglycollate in industrial settings. Immersion for three to four hours will remove all iron oxide and sulfuric acid from specimens without damaging them. Even calcite is unaffected. Further, the solution (but not the undiluted form) is virtually nontoxic.

From the web at
www.commean.com/rocks/mwf/fillers/long

YUKON EMERALDS

Last September, geologist/pro prospector Bill Wengzynowski discovered emeralds while exploring for base metals VMS deposits in Yukon's Finlayson Lake District. The discovery was quickly covered with snow, making this summer the first opportunity to return to evaluate the size and quality of the discovery. Numerous emerald-bearing localities were discovered and, although stones have been evaluated to be gem quality, the size of the emeralds and the size of deposit remains uncertain, as exploration has literally just scratched the surface. There are four known occurrences of emeralds in Canada.

Geolog. Newsmagazine of the Geological Assoc. of Canada (Dec., 1999)

Dinosaur Key

- _C_ Ankylosaurus
- _A_ Dilophosaurus
- _D_ Hypsilophodon
- _F_ Iguanodon
- _E_ Procompsognathus
- _B_ Pteranodon

EAT BALLS OF COAL

Illinois fossil hunters are familiar with so-called iron concretions which are actually siderite concretions found in the overburden of coal strip mines. The beds of peat that formed the coal were subjected to other natural processes besides the deposition of mud or other sediments. The movement of water rich in calcium carbonate through small parts of these beds caused some plants to have their cells replaced by this mineral before the rest of the bed was crushed by the pressure of more plant material or sand and mud from above. The fossilized plants have lasted 300 million years and are almost as they were then.

Professor Tom Phillips, a paleobotanist at the University of Illinois, has used these coal balls to recreate the coal age forests that grew when many of the continents were still connected and Illinois was a low spot, perhaps a muddy delta. He has 40,000 specimens, the largest collection in the world, covering 12 million years of time and 80 different coal seams. His work has enabled scientists to reconstruct the distribution of plants and their relative numbers and when they disappeared.

The detective work which fossilized plant material has allowed scientists to do has shown the movement of the earth's crust and the climatic changes that have taken place. It seems strange that Illinois could have been very near the equator 300 million years ago but this kind of knowledge helps a rockhound to find things that he or she thinks are important.

Recognizing the potential of the material you find is easier when you know about the work of people like Professor Phillips.

Thanks to the LAS News, University of Illinois at Urbana - Champaign from the Winter 2000 edition

The Illinois State Geological Survey, located in Champaign, Illinois, has an e-mail address (<http://www.isgs.uiuc.edu/isgshome.htm>).

The Tully (Feb.-Mar., 2000) based on *LAS News* (Winter, 2000)

HUGE DINOSAUR'S NECK BONES FOUND

By Marcus Kabel, REUTERS

(Dallas, Feb. 1) Scientists in southwestern Texas have unearthed the neck bones of one of the biggest dinosaurs of its kind, a sauropod possibly more than 100 feet long, the University of Texas at Dallas said Tuesday.

The fossilized remains of a nearly complete neck—10 vertebrae measuring a total of 23 feet in length—were found by a university team in mountainous desert country inside Big Bend National Park.

"The animal may have been 100 feet to 130 feet long, depending on the body style," said James Carter of the university's geosciences department, who found the neck.

It is said to be the largest sauropod ever found dating from the late Cretaceous period, which ended about 66 million years ago. Sauropods were plant-munching dinosaurs with long necks and columnlike legs. They reached lengths of more than 100 feet.

Only a couple of weeks ago, paleontologists in Argentina announced the discovery of fossils from the biggest dinosaur ever found, a 150-foot-long sauropod known as the Rio Negro Giant. Such creatures were thought to have gone extinct about 100 million years ago.

But university scientists said the Big Bend creature apparently died 67 million to 68 million years ago—32 million years later.

"The nearest relative is from Argentina—a long way from Texas. So we want to know not only why this big guy existed, but how it got here," said Homer Montgomery of the university's science education department.

The dinosaur is lying on its left side in a curved position. It may have been buried under silt soon after its death, which may account for the high quality of its preservation.

Three of the smaller vertebrae, which weigh up to 467 pounds, have been removed.

But the others, which weigh up to 1,200 pounds each, remain at the site while the university teams consider ways to haul them three miles out of the wilderness area where they were found.

Vehicles are prohibited in the wilderness area. Carter said a helicopter might airlift the fossils if the National Park Service agrees.



FOR FURTHER READING....

Excavations in Indonesia have turned up stone tools of *Homo erectus* dating to about 880,000 years ago. Even at times of lowest sea level, there was an 11-mile gap between the site and the Asian mainland, which means that *Homo erectus* was able to make the crossing on some sort of craft.

Archaeology (May/June, 1998)

Indiana State University's Stephen Hasiotis noticed some unusual white structures jutting out of a layer of clay in Utah in 1996, and eventually identified them as fossil casts of burrows made by mammals in the age of the dinosaurs. He's still looking for fossils of the small critters that dug the burrows.

Discover (June, 2000)

Amateur fossil hunter Joan Wiffen is still digging at 78, and her discovery of dinosaurs in New Zealand has rocked the world of paleontology. She never attended college or got a single research grant: "I was too ignorant to know that dinosaurs officially never existed in New Zealand." Among other things, she has discovered a new species of mosasaur and named several other varieties of fossils she has discovered.

Discover (June, 2000)

When researchers found Clovis points at the Topper site in South Carolina in 1984, they stopped digging, because no one expected any finds earlier than that. Inspired by more recent discoveries of pre-Clovis finds, the researcher went back to the site and dug deeper. He found toolmaking flakes dating back perhaps 20,000 years, much older than Clovis (11,200 years).

Discover (July/Aug., 1999)

Interlayered glacial debris and carbonate rocks in Africa are suggesting to scientists that the earth has frozen over three and perhaps more times in the past. Frozen completely, that is. To 58 degrees below zero. For their reasoning, check the article.

Smithsonian (Dec., 1999)

A commercial fossil-hunter has identified the petrified heart of a *Thescelosaurus*, one of the bird-hipped dinosaurs. The aorta is visible and x-ray scans show left and right ventricles, adding support to the theory that this type of dinosaur, at least, was warm-blooded.

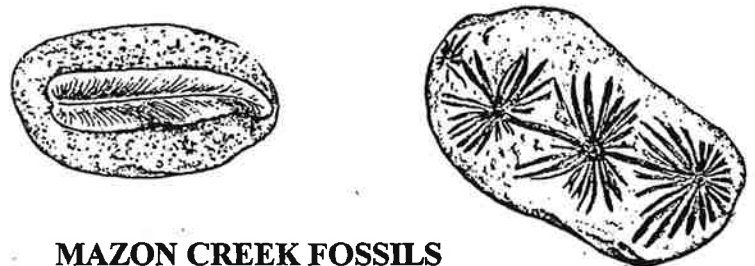
Science News (Apr. 22, 2000)

Two Yale scientists have demonstrated that quartz crystals bear the history of their growth pattern, and it can be read. They have found that, for example, two faces of the same crystal may grow at different rates--one face even 10 times faster than the other. The varying growth rates were detected by measuring the concentrations of impurities taken up by the crystal as it grew.

Science News (Apr. 22, 2000)

Sand-mining crews in Michigan have uncovered about 140 trees buried at the end of the last ice age, about 10,000 years ago. Bark, leaves, twigs and pollen have also been recovered from the site. (No, the article didn't say where it was in Michigan ... sorry.)

Science News (Mar. 18, 2000)



MAZON CREEK FOSSILS

MGMS members, if you would like to use the club's permit to hunt for leaf and other fossils in the Mazon Creek area of Illinois, be sure to contact Kathy Miller before you leave. She has the permit and all the necessary information.