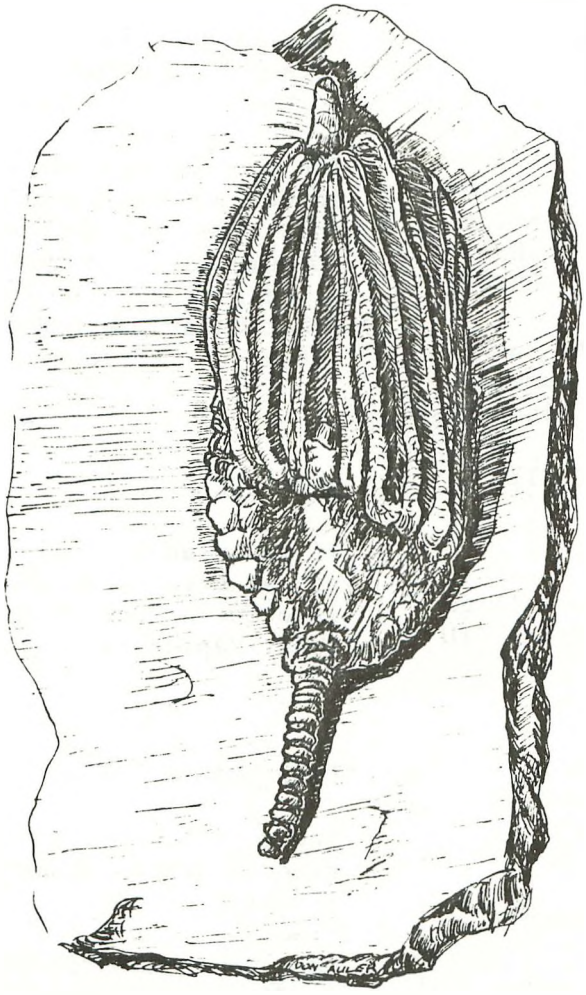
M·A·P·S Digest

VOLUME 8 NUMBER 7

OFFICIAL PUBLICATION OF
MID-AMERICA PALEONTOLOGY SOCIETY
October, 1985



Macrocrinus mundulus
Ramp Creek Formation
Montgomery Co., Indiana
Mississippian
EXPO V -- April, 1983

A LOVE OF FOSSILS BRINGS US TOGETHER

MARK YOUR CALENDAR

5 Oct -- MAPS MEETING -- Izaak Walton League Grounds, Linn Junction Road, Cedar Rapids, Iowa. (See map next column)
1:00 Board Meeting
2:00 MAPS Meeting

Bring your fossils to this Rock & Fossil Swap sponsored by Cedar Valley Rock and Mineral Society.

12 Oct -- MAPS FIELD TRIP -- Palo, Iowa
Devonian Cystoids
Meet 9:00 a.m. Perkins
I-380 Exit 33rd Ave.

18 Oct -- MUNICH SHOW -- MAPS members arrive
19 Stuttgart Oct. 9 for several
20 days of fossil hunting. Someone please write comparing hunting in Europe and USA. HAVE FUN!! FIND TREASURES!! SAFE JOURNEY!

25 Oct -- FOSSILMANIA III -- Oakdale Park
26 Glen Rose, Texas. See Summer
27 DIGEST for reservation blank or
Don Allen
AUSTIN PALEONTOLOGY SOCIETY
8310 Roan Lane
Austin, TX 78736

2 Nov -- MAPS MEETING -- Augustana College
Fryxell Museum, Rock Island, IL
1:00 Board Meeting
2:00 MAPS Meeting

EXPO VIII -- April 11, 12, 13, 1986
Western Illinois University
Macomb, Illinois
ALL ABOUT TRILOBITES or
The Lure Of The Bug
It will be PAR EXCELLENTE!!

MAPS EXPO is in conjunction with Geology Department of Western Illinois. Many thanks are in order to Dr. Jack Bailey who provides much equipment for a smooth show

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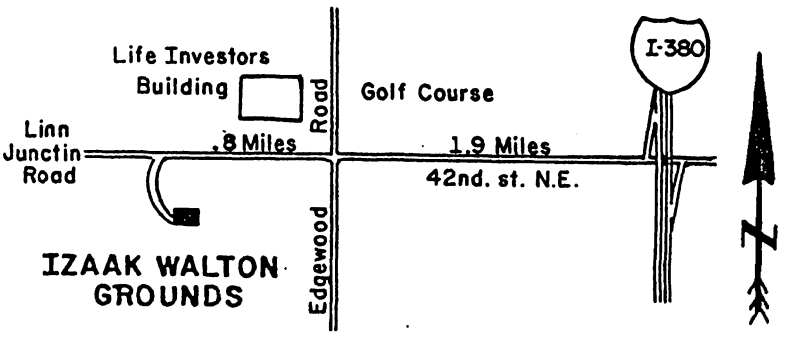

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HUMBOLDT FIELD TRIP

Success describes it. 20 people from New Jersey to the East, Arizona to the West, ND to the North and Kansas City to the South.

The weather was unbelievable. Usually it is so hot one has trouble collecting. Not so this time. We decided to make one more trip to Humboldt. So much quarrying had been done since last year it appears as though those spectabular gastropods will be roads, foundations etc. after next year.

* * *

MAPS FIELD TRIP

If you plan to collect Devonian Cystoids see you at Perkins October 12. If you need more information call Marv Houg, 330 44th St., N.E. Cedar Rapids, IA 52402 -- Phone 319-395-0577

* * *

FOSSILMANIA III

These people are so busy they don't even have time to write. I know because of their news letter.

Meet your MAPS friends from around the country in Glen Rose, Texas October 25, 26, 27. You'll find unbelievable oysters. Strangest shapes you ever could imagine. Those fragile, beautiful Glass Mountain specimens will haunt you forever. Cephalopods and sponges, Texas style--big! Delicate and beautifully preserved echinoids --try those spines under microscope. It's all there and more!

COVER: Special thanks to Don & Dorothy Auler, 623 East Highland, Villa Park, IL 60181
Don wrote: "Made a sketch of a crinoid Macrocrinus sp. Mississippian, Indiana Creek Crawfordsville, Indiana. I purchased it at EXPO V." A note to Bob Howell brought information about those spectacular Crawfordsville Crinoids. See p. 3.

ABOUT THE COVERS: The upcoming covers are just gorgeous. Many thanks to each of you who have responded. PLEASE: they have to be in ink. Pencil does NOT pick up well when we reproduce and sometimes the copy we get is poor. Your illustrations are excellent, but when in pencil you will be disappointed with the results. PLEASE: send something about your fossil. Where you collected, information about the sea or the land, anything that will paint a verbal picture. Don't be threatened by what someone else sends. If they were all the same, it would be tiresome. If you know nothing, perhaps you can refer us to someone who might. We'll research if we can, but getting the DIGEST out is a full time job. Besides, then it all sounds the same. Your covers help set the tone for that issue. You ARE simply great!!

CRINOID FAUNAS OF THE EDWARDSVILLE AND RAMP CREEK FORMATIONS OF INDIANA -- Bob Howell
R #2, Box 98
Roachdale, IN 46172

In a portion of Indiana some of the finest preserved fossil crinoids in the world are found. They occur in the Edwardsville formation of the Borden Group and the Ramp Creek formation of the Sanders Group.

Crinoid beds were first discovered in 1832 at Crawfordsville and within a few years this location became world famous because of its great diversity and fine preservation of fossil remains. Through the years other sites in Montgovery County also became classic locations. The great crinoid specialist, Frank Springer, considered these latter sites to have the finest preserved crinoids in the world.

The Borden and the lowest part of the Sanders Group is chiefly composed of silt which had been deposited in a delta during the middle Mississippian time. This delta was fed by one or more rivers northeast of Indiana. As the crinoids grew in colonies or stands, from time to time there would be a large influx of sediments due to inland flooding or possibly geological disturbances and the crinoids would be covered. In time this would cause their fossilization.

Of all the so called "living fossils" the crinoid is one of the most deserving of this terminology. Found throughout most of the geological ages, they still exist in the modern seas today. Some of these living species have the appearance and characteristic structures of fossil crinoids. Because of the similarities between the two, living crinoids provide knowledge as to the morphology and the living habits of their fossil counterparts.

For many years crinoids were thought to be extinct. In 1755 a discovery was made of a living crinoid in deep water off Martinique in the Carribean and a few years later in the waters of Barbados. About a hundred years later, one was dredged up from deep water off the coast of Norway. This discovery caused great excitement in the scientific community. It had raised as much excitement as the Coelacanths, another "living fossil" would raise seventy years later.

Although the word "crinoid" conveys the meaning lily-like and is commonly called a sea lily, the crinoid is strickly an animal form with no connection to plants except in its appearance. There are two groups of crinoids in today's seas. The stalked or fixed crinoid comprises the smallest percentage of species, 10-15%. The stemless or free moving croinoid makes up the rest.

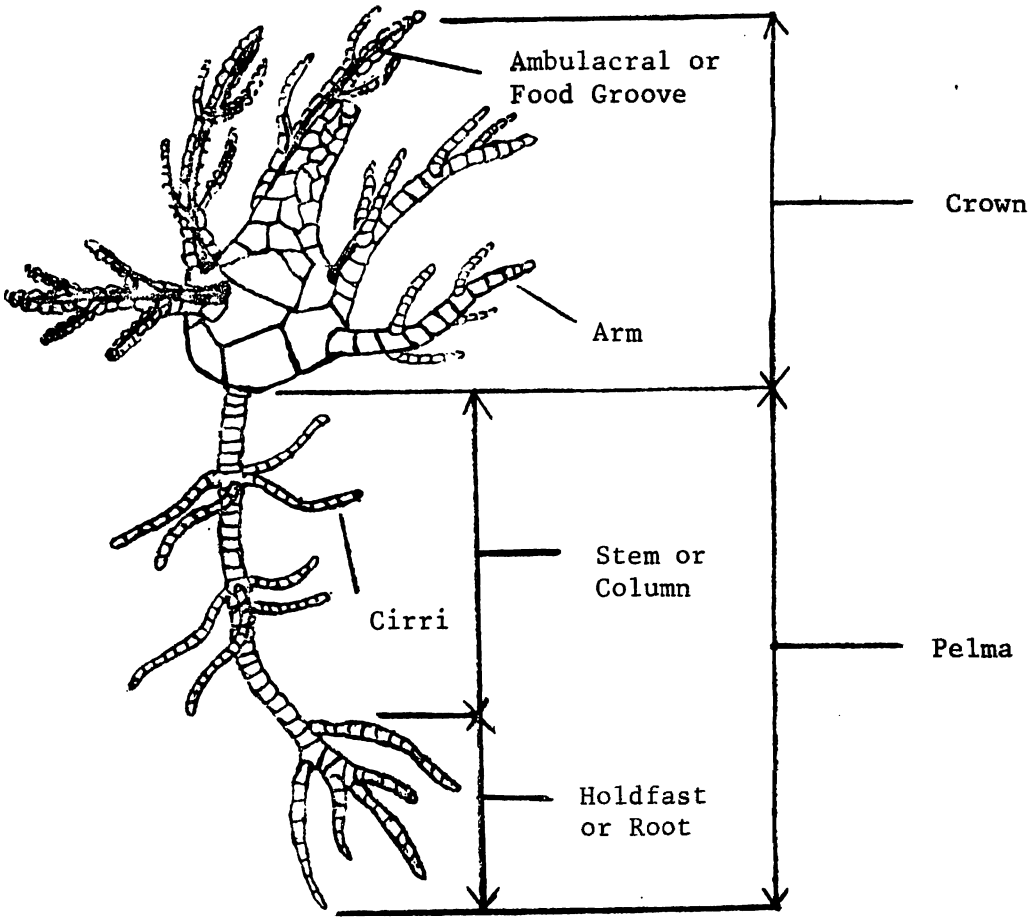
In the ancient seas the stalked crinoid was the predominate group. Crinoids are related to sea urchins, starfish, sand dollars and others in the group known as echinoderms. Characteristics which place these marine animals together are calcareous plates or ossicles and a radial body. Some crinoids are made up of fewer than a dozen plates and other species have possibly more than two million.

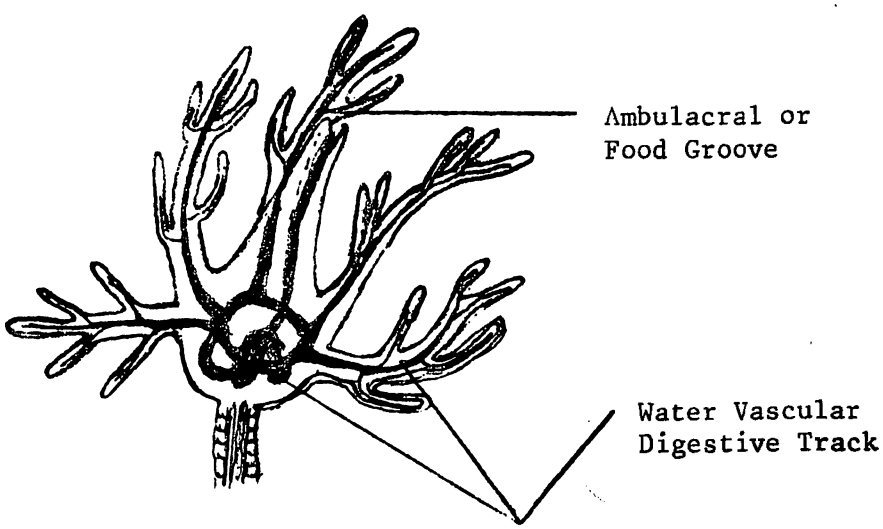
The body of most fossil crinoids consists of crown and pelma. The crown contains the body cavity which houses the vital organs of the crinoid. These being ambulacral, digestive, water vascular, hemal (blood), nerve and reproductive systems. The arm structure is also part of the crown.

Crinoids are filter feeders. They depend upon the current flow to bring planktonic food particles into a basket formed by the arms. Each

arm has an ambulacral or food groove. The food particles are trapped by tube feet and transferred into a mucus substance in the food groove. The particles travel in the mucus down the food groove into the mouth and through the digestive system.

The Pelma of the crinoid consists of the stalk or column and the holdfast. Columns are made up of numbers of calcareous disks stacked on top of each other to form the column. Through the center of each disk is a hole which forms an axial canal in the column. In recent crinoids this canal holds coelomic and nervous extensions of the crown. This is most likely also true of the fossil crinoids. Columns of crinoids are of great diversity in shape and size. They range from 1 mm to 10 cm or more in diameter and from a few mm to greater than 20 meters long. New disks or ossicles are added to the column in one of two ways. Either at the end nearest the crown or at various points along the stalk. In some species cirri are formed along the stalk. There is very little known of the use of these appendages which vary greatly from specie to specie. The holdfast is on the end of the stalk opposite the crown. It is used in anchoring the crinoid to the sea floor or some other objects. The holdfast comes in many shapes and sizes depending on the specie. Most fossil crinoid holdfasts look much like roots of a plant while others look like boat anchors.





In the Edwardsville and Ramp Creek formations it is quite possible that there may have been as many as fifty or more species of crinoids in one colony, each having a different size and form. Many were similar but others had characteristics which made them stand out from the colony. The crowns measured from a few mm to 15 cm in length and stalks ranged from 1 cm to a meter or longer. The various

lengths of stem would allow the crowns to feed in various zones in the water providing more feeding area for the colony.

In most cases the crinoids made up the major preserved portion of the fossil community in these faunas. Also sharing the community were other echinoderms, shells, sponges, trilobites, etc. Together these animals formed one of the most diverse and best preserved Paleozoic faunas in the United States.

As a collector of fossils for over thirty years, there are no collecting locations more exciting than these formations of Indiana. These locations may be disappointing to most fossil collectors who do not have the time, patience, or stamina which can be measured in days, miles of rough country and exhaustion. Hunting fossil crinoids is like hunting the "needle in the haystack". Most of the formations are barren of any fossils. But if everything goes right, the Edwardsville and Ramp Creek formations will yield their treasures and possibly the most exciting of all, a new specie of crinoid never seen before for the enjoyment and the enlightenment of the collector and of the scientific community

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REFERENCES:

Lane, N. Gary, Paleontology and Paleoecology of the Crawfordsville Fossil Site (Upper Osagian: Indiana).

Moore, Teichert, Treatise on Invertebrate Paleontology (T) Echinodermata 2 (1)-(3).

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FOSSIL CLEANING -- Clarence Schuchman
4812 "F" Parkway
Sacramento, CA 95823

...Many thanks to Ray Curtis on his "first book of the Bible" on use of the vibro-tool in preparation of fossils. It is the definitive work of which I am so far aware.

Perhaps there is an "Exodus" to follow his "Genesis". Personally I have had no luck with Burgess tools (except for the old classic model vintage Circa 1947) because they heat and become short-lived under continuous use. I have recently been using the ordinary Dremel 290 of which I can get nearly two for the price of one Burgess. They stretch out a long way if you alternate them when they get hot. If they begin to get tempramental, a couple of turns on the philips-head screws that hold them together often put them back in tune.

To add more impact to the stroke I use 1" to 1½" of ¼' rod turned down to fit into the tool receptacle.

With ammonites I have never gotten much use out of the tungsten-carbide point Ray describes. It is not delicate enough for fine work, and a set of punches ranging from 1/8" to 1/2" dia. kept honed to an invisible point and operated with light hammers have the hand-work flexibility power tools lack.

Instead, for fine work, I take the 1/4" stock I mentioned and drill a 1/16" center hole (rotate the stock in the lathe or drill press and use a 1/16" bit in a hand drill - a-la rifle barrels).

Tap in a set-screw on the side and use this to hold 78 rpm. phonograph needles. This device has more than one advantage. For one thing you can take the side play all these tools exhibit completely out by resting a finger along-side the piece of rod. The importance of this can hardly be overestimated both for preserving the fossil and also the delicate point of the needle.

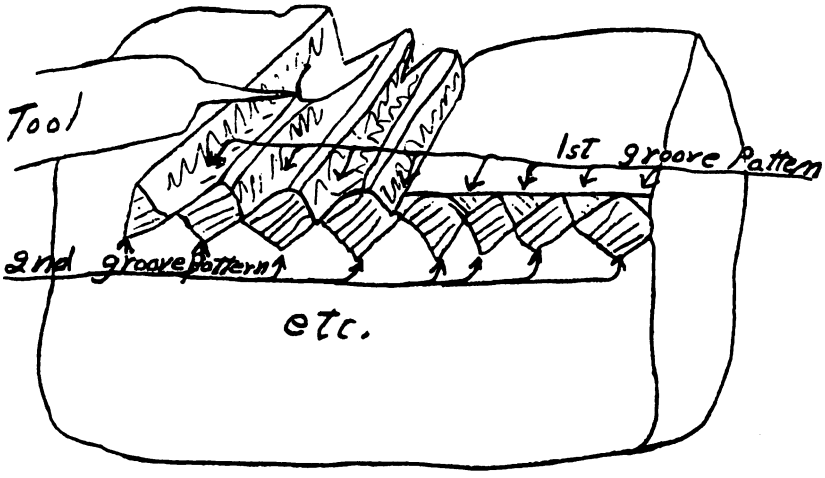
These needles are remarkably tough and hard. I use them mostly in very hard limy nodules which may be somewhat sandy. But the slightest variation from straight-on impact will break off the invisible point. Start with the very least amplitude or stroke the tool will produce. You will be surprised how farly large flakes will fly, sometimes before you even realize you have toughed them. As work progresses the tool will gradually lose its point and the amplitude will have to be increased. At the same time this means you will need to work farther away from the shell in the matrix to avoid damage.

As in any other craft the greatest error is to work with dull tools. It is possible to sharpen the old "78" many times before you throw it away by the simple expedient of spinning it in a hand drill while you touch it with a fine grind wheel rotated in a flexable shaft. Using a lens, an "invisible point" superior to the original can be achieved very quickly and the tip will remain hardened if you can keep the tip grind down to one or two sparks. It doesn't take much to melt the temper out of a piece of metal the diameter of a hair!

Use this tip when actually exposing shell. Work directly down toward the shell at 90°. Chips will fly off with no detectable impact and the tool will never touch the shell if properly done. Attempting to work at a low angle toward the shell will flip off pieces of outer shell and perhaps the fossil itself.

With Upper and even sometimes Lower Cretaceous ammonites in our area if care is taken to remove only minute chips, the matrix at times comes away with only a shiny imprint in the rock of the outside of the shell. If only one chip of shell is loosened you have lost a whole layer no matter how careful you are and how much you attempt to glyptol things down. In most cases, however, you are bound to lose a layer of shell to the matrix anyway because it is recrystallized at the contact point (zone of discontinuity).

If you are working removing rock at a short distance from this zone then the needle can be used at a lower angle such that a groove can be chipped out without "dead ending" the needle in a hole. In such cases parallel grooves may be chipped and the ridges removed leaving more grooves and ridges etc. etc. . . .



Working at this angle it is possible to get the point to "sharpen itself:, in the manner of beaver teeth, with practice. However, this is not your typical operation with this equipment. Jobs like this are better left to the air stylus if you have access to one and can stand the racket, or to punch-and-hammer.

One must add, these are all, in the end, percussive techniques which are apt to take their toll through vibration and shock. Doubtless using these methods exclusively would never produce a fossil with delicate spines or the like. In those cases one must "whisper away" the matrix with thin silicon carbide cutting disks or similar instruments leaving the closest work for the needle.

Ray makes an excellent point involving wetting agents to solve the perennial problem of - "Am I above the shell, - or in the shell, - or (heaven *forbid*) below the shell? Never-the-less the problem of keeping dust and debris off the working surface is accentuated.

The expedient of taping a very fine plastic air hose to the tool and cord is an excellent solution. But attach a valve also lest you spend time in vain search for some key piece of shell that blew off somewhere. It may indeed be the better part of valor to mount the end of the tube in your dust mask where you can do your own blowing.

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AUGUSTANA COLLEGE -- Wanted to Buy:

Publications on the Mazon Creek fauna. These are needed to round out our departmental reference library on this subject. We do not need publications on the flora. And we already have "Mazon Creek Fossils" by Nitecki, and "The Wilmington Coal Fauna" by Langford. Any other publications will be welcome.

If you have one or more publications available, please send me a list indicating the full title, author, publisher, and what you want for the material. Or if you know some one who has such material, please pass our request on to them. A former collector, or surviving spouse?

Or if you know of a paper on this subject that has been presented in one of the many professional journals, I would appreciate knowing about that, too. Please send me the name of the paper, author, name of publication, volume number and date and page reference.

You can contact me at Augustana College, Rock Island, Illinois 61201 Attn Geology Department, R T Johannesen/Curator, Fryxell Geology Museum.

Thanks fellow MAPS members!

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A D V E R T I S I N G S E C T I O N

A REPORT ON THE GILMORE CITY FORMATION -- Copyright 1985 --

Robert Wolf
3521 10th Ave. North
Fort Dodge, IA 50501

The Gilmore City Formation had been known for its crinoids for almost a hundred years now. However the majority of specimens were collected over fifty years ago from three large "nests" in some shaley layers. My book Fossils of Iowa (1983 Iowa State University Press) describes a quarry located northwest of Gilmore City where some crinoids had been found. That area is now abandoned and flooded. Part of the quarry on the west side of the road is still above water but the lower levels are flooded. Several attempts to secure permission to examine another quarry brought a response that "all the good levels are under water".

I then began a search for other exposures of the formation. The Hodges Quarry at Dakota City exposes the Humboldt Oolite which may be a part of the upper Gilmore City but it is equivalent to Iowa Falls Dolomite of the Hampton Formation. MAPS has made four field trips to this quarry because of its wide variety of small fossils, corals, and large gastropods. The western part of the quarry is richly fossiliferous but the same levels at the eastern part contain only an occasional specimen. The same beds are exposed in a frequently flooded quarry north of Dows but the fossils are generally not as abundant or as well preserved as at Dakota City.

The Gilmore City Formation is well exposed and fossiliferous in a quarry north of Clare. However it is also now abandoned and flooded. Abandoned and flooded quarries southeast of Bradgate and south of Rutland expose limestone identified as the Saint Louis Formation. In my opinion the Gilmore City Formation is actually the exposed unit. Some fossils can be found above water level but are not significant or abundant.

Mines are opened up in the Gilmore City Formation at Fort Dodge and Webster City. The beds exposed above are probably part of the Burlington and Keokuk Formations but fossils are rare.

A quarry at Alden exposes the Iowa Falls Dolomite at the base and oolitic limestone identified as the Gilmore City above. The Gilmore City exposures at Gilmore City are believed to be equivalent to the lower part of the Hampton Formation. A younger aspect of the Gilmore City must be exposed at Alden for it rests upon the upper part of the Hampton. Very few fossils have been found at Alden.

Frustrated, I revisited the Gilmore City area and obtained permission to examine the present quarry north of town, southeast of the

(concluded page 9)

PLEASE UP-DATE THE FOLLOWING IN YOUR MEMBERSHIP DIRECTORY --

DON ALLEN, Austin Paleontology Society, 8310 Roan Lane, Austin, TX 78736

EDWARD BOOKS, R.D. #2, Box 306, Hanover, PA 17331

JACK J. BURCH, 116½ Don Gaspar, Santa Fe, NM 87501

JOHN J. FAGEN, Wright High School, 74 W. 124th St., New York, NY 10027

BRUCE HORN, Department of Botany, The University of Kansas, Lawrence, KS 66045

STEVE JACOBITZ, 3520 Urbandale Lane, Plymouth, MN 55447

MARK E. JOHNSON, 13 Goldenrod Lane, Madison, WI 53719

RUTH M. LANDRY, 5022 South Willow Drive, Apartment #1003, Houston, TX 77035

OVERSEAS CHANGES:

G. BELLIGAUD, Les Cailloux, 87170 Isle, FRANCE

CHRIS J. AH YEE, 15 Fyfe Street, Hamilton. 3300, Victoria, AUSTRALIA (NOT Canada)

PLEASE ADD THESE NAMES TO YOUR MEMBERSHIP DIRECTORY --

JOHN IELLAMO
228 Livingston Road
West Hill, Ontario M1E 1L7
CANADA
416-267-9627

Engineer. Fossil sales. Interested in trilobites and rare Paleozoic echinoderms.

LESLIE R. ADLER
Box 30312
Postal Station "B"
Calgary, Alberta T2M 4P2
CANADA
403-289-9972

Retired Math-Science Teacher. Will trade. Major interest Palaeozoic marine fossils, Cretaceous vertebrates. Has Mississippian worm tracks, Chonetes sp., small turtle fragments-later Cretaceous for trade. Has a very extensive private collection. Wants to help his collecting as he occasionally visits U.S. fossil localities. Has collected in Oregon and Virginia.

PIERRE GONIN
40 Boucher
Hull, Quebec J8Y 6G3
CANADA
819-770-0568

Geology Teacher. Will trade. Major interest trilobites, crinoids, ammonites, mammals. Has pyritized starfishes, Tripneustris, Triarthrus Spinosus & Rougensis--Ammonites Trilos from Europe Cave Bear. Interested in fossils and meeting people with the same interest

BREUX BOMMEL
15 Rue De La Montgolfiere
93160 Noisy LeGrand
FRANCE
331-305-4408

Professor. Will exchange. Major interest trilobites (only) Has trilobites and other fossils for trade. Has heard good reports about trilobites of USA and Canada; and wants to exchange good, uncommon material.

MIKE BALOGH
13089 Open Hearth Way
Germantown, MD 20874
301-428-0625

Major-USAF. Will trade. Major interest trilobites! Wishes to share common interest and appreciation in fossils.

MICHAEL ELDREDGE
c/o Schiele Museum of Natural History
Gastonia, NC 28053-0953
704-864-3962
865-6131

Program Coordinator, Schiele Museum of Natural History. Will not trade. Major interest collecting and preparation of vertebrates. Wants personal and professional contacts with collectors, guides, preparators.

JIM & ALICE ERJAVEC
1824 Avenue de las Flores
Thousand Oaks, CA 91362
805-492-6668

Geologist/student. Will trade. Major interest Brachiopods, Cephalopods, Blastoids, Trilobites, Paleobotany, vertebrates. Has Paleozoic invertebrates, Eocene invertebrates for trade. Wants to establish contacts with other fossil collectors.

LESLIE H. HEINZL
11316 Powhatan CT. #7
Louisville, KY 40222
502-425-7368

Cartographer. Collecting 16 years. Major interest fossil shark teeth, exp. Pennsylvanian and Cenozoic, Mollusks, exp. Pennsylvanian and Cenozoic, Echinoderms, Trilobites. Will trade. Wants to communicate with other fossil collectors both amateur and professional.

DR. JOHN H. HOWARD
1119 SE 30th Avenue
Albany, OR 97321
503-926-4386

Retired. Will trade. Major interest Arthropods (trilobites, crabs, shrimp, etc.) and Echinoderms (crinoids, blastoids, starfish, etc.). Has Cambrian and Ordovician trilobites, Oligocene crabs, Ordovician and Silurian brachs, Silurian and Ordovician crinoids, etc. for trade. Wants to find contacts with whom I can trade fossils face to face. Am a world traveler and have so done England to Australia and points in between. Have been collecting about 62 years.

ROSWITHA A. LACUESTA
48 Hillside Avenue
Bedford, MA 01730
617-275-5042

Translator for German. Will trade. Major interest trilobites and sea urchins. Has many German fossils of various periods for trade. Received several MAPS Digests and was impressed by the spirit and atmosphere. Looking for connection to swap, trade and fossil hunt.

MICHAEL J. LONG
HCR -61, Box 305
Thayne, WY 83127
307-883-2946

Carpenter--Fossil Art--Professional Preparator. Will trade. Major interest fossils from the Green River Formation--"all" fossils in general. Has no fossils for trade at this time. Has extensive preparation experience with Green River fossils. Worked for a commercial preparation lab. Wants knowledge in all aspects of Paleontology and to help promote fossils. Wants to elevate them over the "they are just a bunch of rocks" hump.

(MRS.) ALICE R. MCCAMMON
16570 Garden Lane
Los Gatos, CA 95030
408-356-1951

Homemaker and volunteer museum curator. Has nothing for trade at present. Interested in Paleozoic and Mesozoic invertebrates. Has intense interest in fossils (27 years) and feels need for continued update of information.

MARK G. MCKINZIE
209 N. 5th
Weatherford, OK 73096
405-774-0934

Field Geologist. Will trade. Major interest Illinois & Oklahoma Paleozoic invertebrates, expecially trilobites and crinoids. Has invertebrates from "White Mound", Oklahoma, for trade. Loves to collect fossils and meet people with like interest.

ROBERT & NANCY MEYERS
661 Healy St.
Ogden, UT 84403
801-394-5856

Painter. Will trade. Major interest all fossils, petrified wood and mainly trilobites. Has a few Utah trilobites for trade. Collecting new specimens each month. Wants to learn more about fossils & trade with new people.

DENNIS MILLIREN
P.O. Box 4543
Overland Park, KS 66204
913-648-3613

No application form yet.

DAN MOSHER, ED.D.
2501 E. Mountain Rd.
Bartlesville, OK 74003
918-336-9553

Prof. of Biology, Bartlesville Wesleyan College. Will trade. Major interest invertebrate fossils esp. crinoids, ammonites, trilobites. Will trade representative invertebrate fossils from Washington Co., Ok (Upper Penns.-Missourian) or Richmond, Indiana (Upper Ord) for representative invertebrate fossils from other geographic areas. Also have more specialized fossils for trade (upper Penns. crinoids, etc.) Currently enjoy Paleo. as an avocation. Willing to learn and share knowledge. Have collected several years--mainly in Ohio, Indiana, and Oklahoma.

MEGAN OHM
742 Francis Avenue
Cuyahoga Falls, OH 44221
216-929-4794

Student. Will trade. Major interest general paleontology. Has Ohio fossils for trade. Is joining MAPS because very interested in the area of paleontology.

MARK D. PALATAS
9002 Apt. #2 Shelbyville Rd.
Louisville, KY 40222
No phone

Physical Scientist. Will trade. Collecting 10 years. Major interest archaeology - geology - paleontology etc. Has echinoderms and possibly trilobites for trade. Has a burning desire for educational data on Paleontology. A desire for "up-to-date" ideas and creative thoughts.

MARK PATTERSON
1517 Lansdowne Rd.
Indianapolis, IN 46234
317-271-3357

Graphic Designer. I have collected fossils since I was a small boy and am interested in learning more and going on field trips.

BARBARA J. ROEHL
Rt. #3
Lewistown, MT 59457
406-538-5590

Rancher. Will possibly trade. Major interest invertebrates. Has many Miss. brachs for trade. I have been collecting for 30 years. I now live in an area rich with fossilsI can see how exciting good collecting can be. I want to learn all I can, and feel this can be accomplished with communication with other "fossil freaks". Anyone can feel free to stop in Lewistown, MT. It's a good collecting area. (Ed. comment--Barbara used to live in Rockford, Iowa. She went from the frying pan to the fire. Lucky!)

BRAD & HELEN ROSS
107 Westminster
St. Clairsville, OH 43950
614-695-1468

Mining Engineer. Will trade. Major interest minature to cabinet size, display quality fossilsof all kinds. Has for trade self collected and prepared ammonites from Fox Hills Fm in South Dakota. I have been collecting fossils for 6 years and have had a part-time business 5 years. I need to enlarge my number of contacts with like interest.

STEVE SMALL
PO Box 1490
Oroville, CA 95965
916-589-0972

No application form yet.

FORREST STEVENS
4323 N. Blackcat Rd.
Meridian, ID 83642
208-888-6277

Student. Will trade. Major interest all fossils, northwest fossil locations, identification of fossils. Has for trade Pliocene fish bones, Pennsylvanian fossils, petrified wood. Want to learn about fossil locations in my area and trade for fossils from other areas.

MR. & Mrs. B. W. UPSON
7933 Windhill Dr.
Indianapolis, IN 46256
317-842-7899

These are old members Billy W. & Jessamine. School teacher. Major interest fossils of Indiana.

FRANKLIN & BETH UPSON
Campus View #412
Bloomington, IN 47401

Students. Will trade. Major interest Echinoids, trilobites, and horn corals. Has horn corals and crinoid stems for trade. Used to be a member of MAPS.

ROBERT E. & KAREN VAN EST
RR #5, Box 1
Danville, IN 46122
317-745-2196

Contractor & Salesman. Will trade. Major interest trilobites. Want to learn more about fossils and attend field trips to build our collection.

- -

GILMORE CITY FORMATION -- Concluded

site mentioned in Fossils of Iowa. There I found a dark limestone just above the water level. Brachiopods are abundant in some places. A grayish limestone above this layer contains worn brachiopods and some crinoid crowns. Eight hours of searching yielded five damaged and poor quality specimens.

The quarries and mines at Dakota City, Clare, Alden, Fort Dodge, and Webster City are owned by Weaver Construction Company in Iowa Falls. The present operations at Gilmore City are owned by the Midwest Limestone Company of Gilmore City.

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ROCKS and MINERALS -- November/December, 1983 -- Volume 58 Number 6, Cost $3.50 has an article "Fossils From Canada's Burgess Shale" by Frederick Collier. You can still get this magazine -- Write Marie Huizing, 5341 Thrasher Dr., Cincinnati, OH 45247. Jim Konecny brought one to EXPO last year which Fred signed for him. You ready, Mr. Collier? You have from now until April to develop muscle in your right arm.

NATIONAL GEOGRAPHIC, Vol 168, No. 2, August, 1985. 2 excellent articles: "Our Restless Planet EARTH" complete with map, talks about the movement of the oceanic plates. The second article "Fossils: Annals of Life Written in Rock" is also exciting. Pictures of trilobites belonging to Tom Johnsonare included in this article. Some of you surely met Tom at EXPO last year. A letter has been sent asking for reprints or copies of the magazine. No answer to date.

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This is the Logo of the newest Paleontological Society. 57 charter members, covering an area from the Rocky Mountain Region with Canada on the North and Mexico on the South. 3 MAPS members are officers. TRILOBITE TALES the name of the newsletter

Mailing address: Western Interior Paleontological Society, P.O. Box 20011, Denver, CO 80220-0011

.GOOD LUCK from all of MAPS!

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MYRTLE BEACH FOSSIL CLUB will host their third annual Fossil Fair, December 7, Santee Cooper Auditorium, 21st Ave. N and Oak St, Myrtle Beach, SC. Professionals from various universities and museums will be on hand to identify fossils. For further information contact Mrs. Aura Baker, President, M.B.F.C, Rt 6, Box 269A, Conway, SC 29526 802-347-7592

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The Mid-America Paleontology Society--MAPS--was formed to promote popular interest in the subject of paleontology; to encourage the proper collecting, study, preparation, and display of fossil material; and to assist other individuals, groups, and institutions interested in the various aspects of paleontology. It is a non-profit society incorporated under the laws of the State of Iowa.

Membership in MAPS is open to anyone, anywhere who is sincerely interested in fossils and the aims of the Society.

Membership fee: January 1 through December 31 is $7.00 per household.

MAPS meetings are held on the 1st Saturday of each month (2nd Saturday if inclement weather). September, October, May, June, and July meetings are scheduled field trips. The August meeting is in conjunction with the Bedford, Indiana, Swap sponsored by the Indiana Society of Paleontology, the Indiana Chapter of MAPS. November through April meetings are scheduled for 2 p.m. in the Science Building, Augustana College, Rock Island, Illinois. MAPS Annual International Fossil Exposition is held in the Spring, and a second show in the Fall, Fossilmania, is sponsored by Austin Paleontological Society, a MAPS Affiliate.

MAPS official publication, MAPS DIGEST, is published 9 months of the year--October through June.

CYATHOCRINITES

FIRST CLASS MAIL

MID-AMERICA PALEONTOLOGY SOCIETY

Mrs. Madelynne M. Lillybeck
MAPS DIGEST Editor
1039 - 33rd St. Ct.
Moline, IL 61265

Dated Material - Meeting Notice