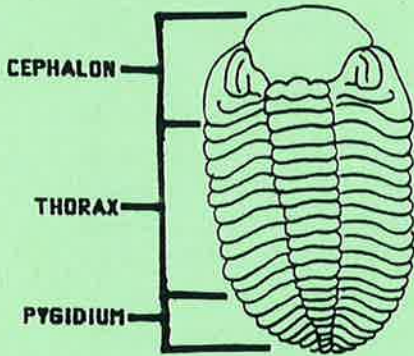


THE ROCKFINDER

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

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THE ROCKFINDER

OCTOBER, 1998

MICHIANA GEM & MINERAL SOCIETY

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 Field Trips
 Membership All Members

The purpose of the Michiana Gem & Mineral Society is to promote interest in and study of the earth sciences and the lapidary arts, and the sharing of 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), June (field trip), July (no meeting), August (club picnic) and December (Christmas party).

Board meetings are held before the general meetings.

The annual club show is Labor Day weekend.

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. Staff: Editor, Tom Noe, 305 Napoleon Blvd., South Bend, IN 46617. Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617. Reporters, Bob Heinek, Herb Luckert, club members.

All contributions for publication should be in the hands of the editor by the 10th of each month. Call 289-2028 or 282-1354. Permission is hereby granted to reprint any original *Rockfinder* articles, as long as due recognition is given along with the reprint.



Yearly Membership Dues (Payable by January 1)

_____ Individual \$10.00 per year
 _____ Family \$15.00 per year
 _____ Junior \$1.00 per year
 _____ Subscriber \$7.50 per year

(One-half these amounts after July 1)

Please indicate areas of special interest.

General Geology___ Beads___
 Gems & Minerals___ Silversmithing___
 Fossils___ Artifacts___
 Cabochons___ Rockhound___
 Faceting___ Crystals___
 Carving___ Micromounts___
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Name_____

Address_____

City,ST.,Zip_____

Please send your dues and this form to
 Michiana Gem & Mineral Society
 c/o Margaret Heinek

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

Will attend meetings?

Name_____

Birthday_____ yes___no___

Name_____

Birthday_____ yes___no___

Name_____

Birthday_____ yes___no___

Name_____

Birthday_____ yes___no___

Date of Wedding Anniversary_____

Phone_____

THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

Volume 38, Number 8

October, 1998

Meeting: Sunday, October 25, 1998
Doors open at 1:30 p.m.
Meeting at 2:00 p.m.
Guests are always welcome.

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

October Hosts: Jesse Zeiger & Diane Gram

October Program: Where, oh where, did my agate come from? Tom Noe will bring agate specimens and talk on agate formation. Bring your own agates for discussion.

SIGN UP FOR NOVEMBER FIELD TRIP

Club members, call Kathy Miller soon (291-0332) to sign up for the fall field trip to the Field Museum in Chicago. The one-day trip is free to club members, but you will have to pay admission fees yourself.

Once you have signed up with Kathy, meet at the K-Mart parking lot (near the corner of Ireland Road and 31 South) on Sunday, November 8. The bus will leave at 8 AM, so be sure to arrive a little early for checking in. You may bring your own bag lunch or purchase food at the museum. Wear comfortable walking shoes. We will return by approximately 6 PM.

UP AND COMING

Oct. 23-25: Central Michigan show, Marshall Street Armory, Lansing, MI.

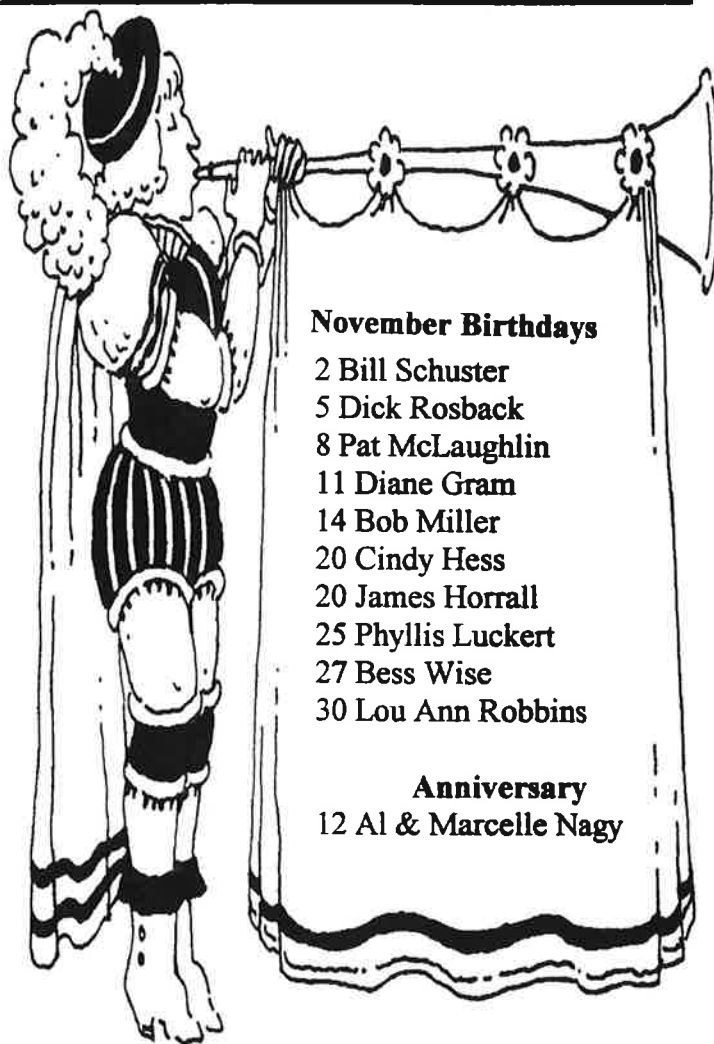
Nov. 6-8: Licking County Rock and Mineral Society Show, Indian Mound Mall, Heath (Newark), OH.

Nov. 6-8: Blackhawk Gem & Mineral Show, Colonial Village Mall, Rockford, IL.

Nov. 6-8: Annual Micromount Symposium, Cleveland Museum of Natural History. Contact William Cook, 684 Quilliams Rd., Cleveland Hgts., OH 44121.

Nov. 7-8: Mid-Michigan show, Midland, MI.

Nov. 9: Michiana club field trip to Field Museum. Members call Kathy Miller to sign up.



November Birthdays

2 Bill Schuster
5 Dick Rosback
8 Pat McLaughlin
11 Diane Gram
14 Bob Miller
20 Cindy Hess
20 James Horrall
25 Phyllis Luckert
27 Bess Wise
30 Lou Ann Robbins

Anniversary

12 Al & Marcelle Nagy

**PAY YOUR DUES. YOUR DUES
SHOULD BE PAID BEFORE
DECEMBER 31. SEE DIANE GRAM
AT THE MEETING.**

MARGARET'S COLUMN



It was very nice to see so many members and guests at the September meeting. We also had several new members who attended. We welcome you!

If you missed the meeting, you really missed a very good program given by members Dennis and Jan Horrall. Jan and Dennis spent a six-day "vacation" at Como Bluff, in Rock River, Wyoming, digging dinosaur bones with Robert T. Bakker. Bob Bakker, author and paleontologist, served as a consultant to Steven Spielberg on the set of the movie *Jurassic Park*. The Horralls had many samples that she was able to have and pictures and slides of the area. Sure wish I was able to go on a dig!!!! They made it so interesting.

Jan plans on going back next year and taking a course in preparing dinosaur bones for study and display. She explained that the bones they found are not petrified, and are very soft and fragile. In order to get them out of the area, they must be covered with plaster or something to save them until they can be worked on in a lab.

Diane Gram, treasurer, gave a report on the profit from our show. There is one bill still out, but it was a good report. Bob Heinek gave a report on our publicity, and all agree our mailing list is the best way to get out to the public about the show.

Remember that the nominating committee will give their report at the October meeting. We will vote in November and the new officers will take office in December. If you are asked to serve as an officer, think about it and say "yes." This is your club, and you should have a say as to who is in charge.

Bob and I spoke about rocks to four classes at Corpus Christi school, Monday, October 5. The fourth-graders had lots of questions but the other grades were pretty quiet. We handed out polished stones, which were interesting to all the kids. We are going to St. Joseph's school on October 19.

See you in October.

* * * *

DELEGATE REPORT FROM MWF CONVENTION, HOUGHTON, MICHIGAN

The MWF treasurer announced that the annual report form for dues payment and insurance is planned for October 1, due by January 1, grace period to January 15.

Future conventions are planned for 1999 in Columbus, OH, and 2000 in St. Louis, MO.

A special committee, to be chaired by Dave Olson, was appointed to investigate the possible MWF purchase of one or more mine dumps to preserve collecting areas in the Upper Peninsula of Michigan. The report will be made at the fall meeting, October 24, 1998.

The convention report for 1998: "Dealers are happy, field-trippers are happy." The Columbus, OH, convention packets are done. They will have 39 dealers, and the dates are April 10 through 11, 1999.

There were some changes made by the AFMS Uniform Rules Committee regarding competitive displays in minerals and petrified wood. Those who plan on exhibiting competitively in those areas should be alert to these changes.

The fall MWF executive meeting will be October 24, 1998, in Leslie, MI.

Robert Heinek, delegate

* * * *

Diane Gram will be taking your 1999 dues at the next meeting. We would like to have them all in by December in order to have the roster out in January.



MINUTES FOR SEPTEMBER 27, 1998

Regular meeting at Our Redeemer Lutheran Church

President Margaret Heinek called the meeting to order at 2:00 P.M. Present were 23 adult members, 3 junior members and 6 guests.

Sr. Jeanne and Sr. Georgia, hostesses, served an assortment of doughnuts and cider.

Minutes of the last meeting were accepted as printed in *The Rockfinder*.

Treasurer Diane Gram reported that our show at Century Center made a profit and her report will be filed for audit. However, all expenses and incomes have not been tallied.

Bob Heinek, our delegate to the Midwest Federation, gave a detailed report. This report appears as a separate report in this issue of *The Rockfinder* and will not be reported here. Bob also reported on attendance at our show. It appears that announcements which were sent to approximately 1,000 individuals and families were the most successful form of advertising.

As a result of contacts made at our show, Bob and Margaret were asked to give classes on fossils, rocks and minerals to students at St. Joseph grade school and Christ the King school. After discussion it was recommended that we give each child participating a polished stone.

Librarian Diane Gram reported that nearly all of the library books have been color-coded. However, we have more books than our portable bookcase can accommodate. "What should be done with these extra books?" was her question.

Gordon Dobecki is receiving cancer treatments. It was suggested that he would be encouraged by hearing from us. His address is P.O. Box 506, Selma, OR 97538.

Old business: In response to a bill from the Chamber of Commerce for membership dues of \$265 (an increase of \$10 over last year), we discussed whether benefits received from membership warranted this amount. It was decided they do not. A motion to cancel our membership was made by Sr. Jeanne and seconded by Sally Peltz. All voted "yes."

New business: Diane Gram will be accepting

1998/99 dues at the October meeting.

Vice-President Sr. Jeanne Finske will be forming a nominating committee for a slate of club officers for 1999.

Margaret Heinek made a suggestion that workers at the Century Center show park downtown where parking is free, if possible. The parking fee at the Century Center lot has gone up to \$3.

Display cases are still available for sale.

It was noted that Betty Stout still has boxes of materials for sale. Please call Tom Noe, 289-2028, to make arrangements for either October 3 or October 10.

Leo Heynssens announced that he has a new 24" saw which will cut rough. He volunteered to cut large pieces for members. Please call him. Thank you, Leo.

Mike Slattery reported on the Kiddies' Corner. To make collecting for kiddies' games easier, he recommends that the price be raised to 25¢. All agreed. Mike made the observation that kids were more attracted to rocks arranged in egg cartons or other special containers made to hold them such as a gallon plastic jug with an opening cut out of the top side (spare the handle). These specimens should be labeled. Mike volunteered to label the rocks.

Door prizes: Nature postage stamps went to all juniors present. Adult members Pam Rubenstein, Greg Korte and Bill Miller selected ignites.

On display were three books of club photographs brought in by Ed Miller.

Meeting was adjourned at 2:45 P.M., followed by refreshments and program. Jan Horrall, a teacher of earth science, showed slides and a display of pictures and artifacts from her dinosaur dig in Wyoming last July.

Gladys Pacholke, Secretary



DINOSAUR GUTS PRESERVED IN FOSSIL

Remains of previously unknown species show extraordinary details

By Robert Cooke, Newsday

Surprisingly well-preserved fossil muscle fibers, intestines and other tissues have been found along with the bony parts of a juvenile dinosaur, according to scientists.

Originally uncovered in the 1980's by a private collector, the young dinosaur is so well preserved in fossil form that it "shows details of soft anatomy never seen previously in any dinosaur," paleontologists Cristiano Dal Sasso and Marco Signore report Thursday in the journal *Nature*.

The remains are thought to be 113 million years old, and came from an unknown species related to the gigantic meat eater *Tyrannosaurus Rex*, the Italian team reports. It was small, about 2 feet long, but would probably have grown to 6 feet in length if it had survived into maturity.

A few remains of dinosaur soft parts have been found in the past, but the Italian team says their small dinosaur reveals an extraordinary amount of detail, including the sizes and positions of organs. And, they say, there is no hint that the animal had feathers.

"A unique, striking feature of the specimen is the preservation of soft parts. Muscles are present, with individual muscle fibers visible under magnification, the team reports. Also present are the intestine, "positioned farther forward than it is generally thought to be," plus the colon.

"The gut is surprisingly short and deep suggesting a high absorption rate for nutrients," they write. There are also traces of tissue that may be parts of the trachea, and perhaps remains of the liver.

The two Italian researchers--from the Natural History Museum in Milan and the University of Naples--say the dinosaur fossil came from Benevento Province in an area of Southern Italy already known for its beautifully preserved fossil fish. The dinosaur's remains are almost complete, except for part of the legs and much of its tail, the team reports.

Dal Sasso and Signore named the specimen *Scipionyx samniticus*. It was found lying "on its left side in nearly perfect anatomical articulation." It was well preserved because when the animal died it was in a shallow, oxygen-poor lagoon, where deposits eventually turned into limestone. It is the first dinosaur fossil discovered in Italy.

"It's a fabulous find," said paleontologist Paul Sereno at the University of Chicago. "This kind of detail is very, very rare."

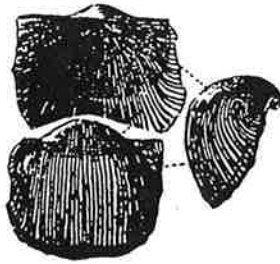
Sereno, who recently announced discovery of a *T. Rex* specimen in Africa, said of the Italian find, "One of the really neat things about this one is that it doesn't preserve the skin very well. But it has the best intestinal tract I've ever seen. That can give you some idea of how it was processing its food."

Spokesman Review 3/26/98

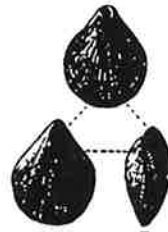
Via Crystal Cluster September, 1998



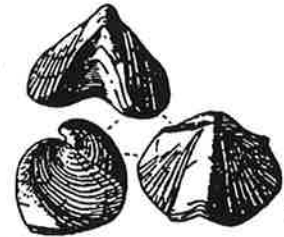
BRACHIOPODS



1 - Strophomenid brachiopod, *Reticulatia*, Pennsylvanian Period, x0.7



2 - Terebratulid brachiopod, *Terebratulina*, Recent - living today, x1



3 - Spiriferid brachiopod, *Paraspirifer*, Devonian Period, x0.7

WHAT IS A BRACHIOPOD?

Brachiopods belong to the large category of animals without backbones, the invertebrates. They have two shells or valves that are often composed of the mineral calcite (calcium carbonate). Brachiopods have a coiled feeding organ called a lophophore that is protected by its valves.

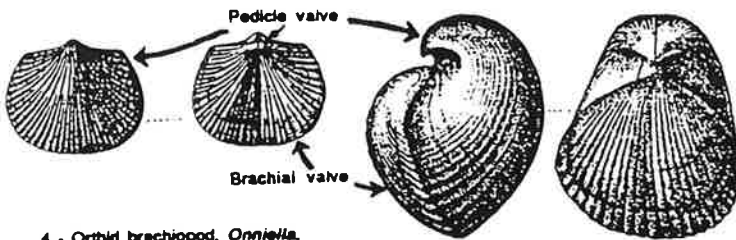
There are two major divisions (Classes) of Brachiopods: the inarticulate Brachiopods and the articulate Brachiopods.

Some of the oldest shell invertebrate fossils known are brachiopods. They have a fossil record stretching back to the start of the Cambrian Period, some 570 million years ago. Brachiopods are still living in the world's oceans

It is the brachiopod valves that are often found fossilized. On the inside surface of some, muscle scars (figure 6) or the support structure for the lophophore may be found (figure 8).

WHERE DO THEY LIVE?

Brachiopods live on the ocean floor. They have been found living in a wide range of water depths from very shallow waters or rocky shorelines to ocean floor three and a half miles beneath the ocean surface. They are known from many places, ranging from the warm tropical waters of the Caribbean to cold Arctic seas.



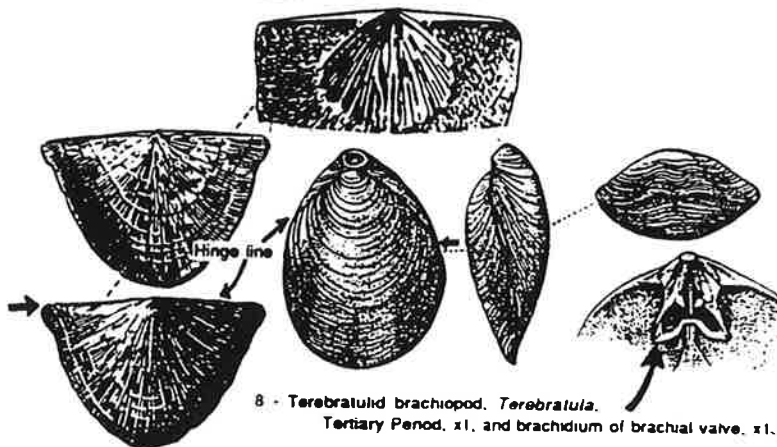
4 - Orthid brachiopod, *Onniella*, Ordovician Period, x2.5

5 - Pentamerid brachiopod, *Kirkidium*, Silurian Period, x0.75

MANY TYPES OF BRACHIOPODS

There are lots of different shaped brachiopods. When you look at them sidewise, some are biconvex (fig. 3, 5, 10), and some are concavo-convex (fig. 1). The valves are joined along the hinge line which can be straight (fig. 5,8,11). Some have smooth valves (fig. 8,11), others have ridges or costae (fig. 7,9,19,11)

Articulate brachiopods are often the most common fossil brachiopods. They have two valves, the larger is the pedicle valve. The pedicle foramen is a hole towards the end of the pedicle valve (fig. 2, 4, 7, 8). The valves articulate by teeth on the pedicle valve that fit into sockets on the brachial valve, giving them the name "Articulate brachiopods". There are number of distinct types of Orders, mentioned below.



8 - Terebratulid brachiopod, *Terebratulina*, Tertiary Period, x1, and brachidium of brachial valve, x1.5

6 - Strophomenid brachiopod, *Rafinesquina*, Ordovician Period, x0.7 detail of muscle scars on pedicle valve interior, x1

Orthids (fig. 4) are usually small with a short

straight hinge line. The pedicle foramen is often visible. The gently biconvex valves have many small costae. They are the first group of articulates known.

Pentamerids (fig. 5) are often large, up to several inches long. They are strongly biconvex and have a curved hinge line.

Strophomenids (FIG. 1,6) have a straight hinge line and the valves are concavo-convex.

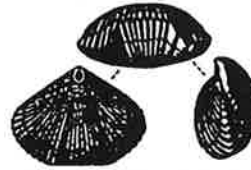
Rhynchonellids (fig. 7) are biconvex, often with costae and a pedicle foramen in the pedicle valve.

Terebratulids (Fig. 2,8) often have smooth valves with growth lines and a pedicle foramen. They are biconvex and have a rounded hinge line. A calcareous loop inside the smaller brachial valve. They

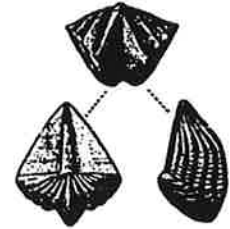
are biconvex, often with a pedicle foramen.

Spiriferids (fig. 3,9) may be large. They have a straight hinge line and costae on their valves. **Atrypids** (fig. 10) have a rounded hinge line and often have costae on their valves.

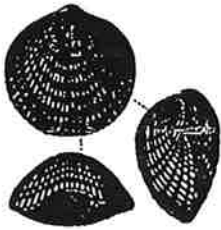
Athrids (Fig.11) have a rounded hinge line and the valves are often smooth.



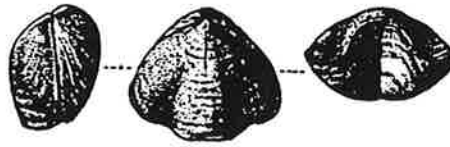
7 - Rhynchonellid brachiopod, *Cyclothyrus*,
Cretaceous Period, x1



9 - Spiriferid brachiopod, *Cyrtir*,
Devonian Period, x1.5



10 - Atrypid brachiopod, *Atrypa*,
Silurian Period, x1



11 - Athyrid brachiopod, *Composita*,
Mississippian Period, x1



12 - Inarticulate brachiopod, *Lingula*,
Mississippian Period, x1.5

Inarticulate brachiopods have two valves, but do not have teeth and sockets, relying on muscles to hold and move them. *Lingula* (fig.12) is an unusual brachiopod, not only because it has two similar sized valves, but also because it lives in a burrow, attached by a long pedicle. It is found today living in sandy beaches along the coast of Japan.

GEOLOGICAL TIME

Paleontologists study fossils from different layers of sediment, or strata. These strata accumulated at various times during geologic time (see Table 1).

Brachiopods are very common fossils in rocks from certain parts of North America and other continents around the world. The evolution of different brachiopods through time can be useful in identifying the time at which a sedimentary rock containing these fossils formed.

It has long been assumed that brachiopods are not a minor group of animals on their way to extinction. Certainly they were more abundant in the shallow seas of the Paleozoic Era than they are today. However, as more is discovered of their present-day distribution, they appear to be more widespread and successful in today's oceans than previously realized.

-Prepared by Michael R. Sandy
Department of Geology
University of Dayton, Ohio
Distributed by
The Paleontological Society
Lakewood, Colorado

NEW METHOD OF TUMBLING

By Al Nutile

The writer believes that the following idea can take much of the work out of the popular method of polishing rocks and gemstones by tumbling. All the instructions we have seen state: "Wash stones and tumbler very clean between each change of grit or final polish materials," at the same time stating: "If liquid is too thin, add some slurrp or grit from previously used material." We know some will argue against our method but here goes:

Don't wash at all after each week of tumbling with grit! Start with #80 grit, tumbling a week. Then, don't empty the tumbler but add 5 teaspoons of new grit (one step finer) to the mixture in the three-pound tumbler. Follow this procedure through #180, 320 and 600 grit. Now (finally), thoroughly wash the stones and tumbler before prepolish and final polishing.

For a really glossy finish, take one or more weeks (after washing out the polishing powder), adding three spoons of sugar, one spoon (level) of Cascade or All or any nonsudsing detergent and about 10 drops of muriatic acid, if you have some. Let stand one minute open, close tub and tumble for a week.

We have run 11 tubs using this method and found that even ordinary sandstone comes out highly glossed. Except for the extra final steps, you save three washings and getting rid of the slurrp each time. Saves time, work and mess and still gets a better polish on rocks and gemstones!

Tulip City Conglomerate, (no date available)

TOP 10 TIPS FROM MARTHA STEWART'S NEW BOOK, *Decorating with Fossils*

10. Attach some wing-like brachiopods to the backs of your trilobites with a hot glue gun and spray paint them gold. Hang them on the Christmas tree as paleo-angels. Bumastoids are especially cute.

9. Long, thin cephalopods make nice swizzle sticks for your guest's drinks.

8. Cut hollow dinosaur leg bones into 2-4 cm sections, glue a brachiopod to the side, and spray paint gold to make elegant napkin rings.

7. Turn a large trilobite upside-down and hollow it out with an air scribe. It makes a very attractive soapdish.

6. Create a festive wreath by using your glue gun to stick large fossil shark teeth onto a loop of curly wire. Spray paint green and wrap with gold ribbon.

5. Drill a hole through the ends of large brachiopod and bivalve shells and string them together with mono-filament fishing line to make a lovely wind chime. I had mine tuned in the key of G-major, and when properly arranged and hung in a 7 km/hr westerly breeze, it plays the first three bars of Bach Brandenburg Concerto #4.

4. A fossil fish plate from Solnhofen, once glazed and fired, makes a lovely serving platter for hors d'oeuvres or salmon.

3. Using a hammer and screwdriver, smash and pry off the pearly, opalized outer layer from *Platyceras* ammonites. Then nip the pieces to the right size with a pair of tile nippers and set them with grout into a colorful peacock or cherub mosaic as a delightful backsplash for the kitchen sink.

2. If you have an old, intact Neanderthal skull, cut off the top of the cranial vault, line with lettuce leaves, and use as a bowl for dip. Cherry tomatoes in the eye sockets give it a friendly look.

1. Mount a *Tyrannosaurus* mandible complete with skin on the vestibule wall at the cottage. It makes a sturdy and rustic coat hanger. Don't forget to sand off the tooth points and serrated edges with a fine sandpaper tool to prevent damage to coats.

from *Ottawa Paleontological Society Newsletter*
Rockhound Record via ROCKBUSTER NEWS

E-MAIL RESOURCE FOR LAPIDARY WORK

You are invited to join the Lapidary Digest e mail list, a free mail list devoted solely to all the lapidary arts except faceting. It focuses on the cutting carving, shaping, knapping, polishing and assembly of rocks or minerals into cabs, special shapes, intarsi and channel work pieces. Tumbling, slab and trir sawing, the types and properties of stones used for lapidary, and the treatments of these stones are all proper topics for discussions. The list has over 1,200 subscribers and is sent out in digest form, about twice a week.

To join, send a message to <<lapidary@mindspring.com>> with the word SUBSCRIBE on the subject line of the message. This is a programmed subscription which picks up your e-mail address from your message, so be sure to subscribe from the computer to which you want the digest to be sent. All future communications with the digest computer must be from the same computer address.

A welcome letter will be sent to you shortly after you subscribe, containing policies and procedures for interacting with the digest.

DID YOU EVER WIRE-WRAP A STONE OR CRYSTAL?

Make a Wire-Wrap Pendant - by Shirley Greenberg

Use 4 flat wires 6" long (larger stones longer wires).

Clean and straighten wires.

Tape masking tape in center of 2 wires

(until binding is firm).

Bind 2 wires with 3rd: begin about 1/3 of way from top.



binding: hold 2 wires firmly, bring third wire around to begin binding. Bend binding with thumb at 90°. Clamp with flat pliers (put deep into jaws of pliers.)



Bind 3 turns on one side and 4 on the other side. Clamp with pliers after each turn of the binding wire.

Bend loop with round pliers for bail loop. Clamp with flat pliers at base of loop flush next to top of wrap.



Bind up 3 or 4 times to catch end of bail loop.



Distance between bindings is determined by size of stone.



Spread wire to accept stone and ties.

Bend bail loop toward stone so that finished straight. (side view)

front of pendant over pendant will hang



Tie in stone with extended wires by hugging the contours of the stone. Extra wires can extend in space around the stone to make an interesting design.



(front)



(back)

Ends of wire used to hold stone, or form design, will tie around the wires that were spread for back of pendant. Clamp flat with pliers and cut flush so that there will be no rough edge.

