

THE ROCKFINDER

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



THE ROCKFINDER

OCTOBER, 1999

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), 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 (ph. 289-2028). Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617 (ph. 282-1354). Reporters, Bob Heinek, Herb Luckert, club members.

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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

Please indicate areas of special interest.

General Geology___ Beads___
 Gems & Minerals___ Fossils___
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 c/o Margaret Heinek
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Additional names:

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THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

Volume 39, Number 8

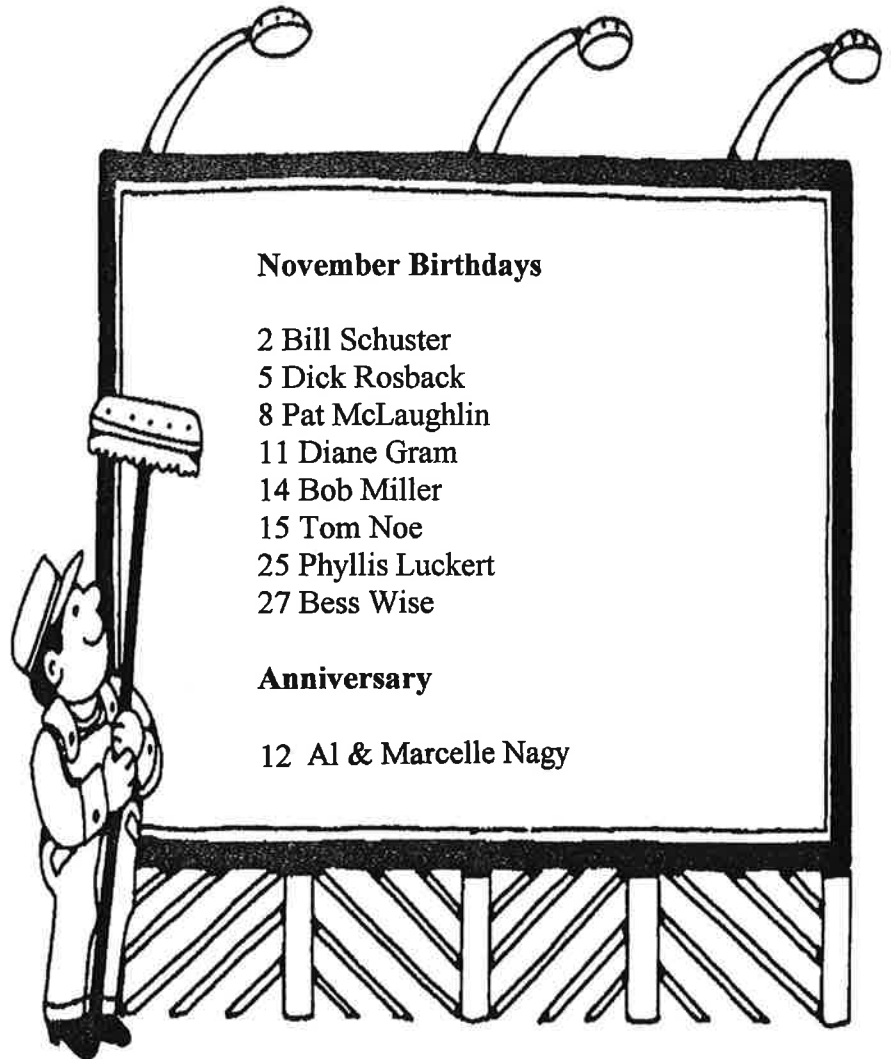
October, 1999

Meeting: Sunday, October 24, 1999
Doors open at 1:30 p.m.
Meeting at 2:00 p.m.

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

Program: Ed Miller will talk about rockhounding in Alaska and the Yukon, and show some slides and photos of the Labor Day show.

Hosts: Pat and Tom McLaughlin



November Birthdays

2 Bill Schuster
5 Dick Rosback
8 Pat McLaughlin
11 Diane Gram
14 Bob Miller
15 Tom Noe
25 Phyllis Luckert
27 Bess Wise

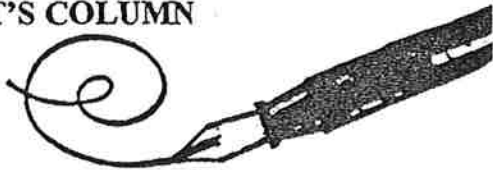
Anniversary

12 Al & Marcelle Nagy

UP AND COMING

- Oct. 29-30--28th Annual Rock & Gem Mini Show. Blue Water Lapidary Society. Port Huron Museum, 1115 6th St., Port Huron, MI.
- Oct. 30-31--Evansville Lapidary Society 32nd annual show, Washington Square Mall, Evansville, IN.
- Nov. 5-7--Micromineral Symposium, Cleveland Museum of Natural History. Information, call Bill Cook, 216-381-9003.
- Nov. 6--Dearborn Society 34th annual auction, Allen Park Civic Hall, Allen Park, MI. Info, 313-928-5660.
- Nov. 12-14--Annual Gem, Mineral & Jewelry Show. Midwest Facetors Guild. Gibraltar Trade Center South, Eureka Road, Taylor, MI.
- Nov. 13-14--Toledo Gem & Rockhound Club open house, Toledo Botanical Gardens.
- Nov. 26-28--Geodon Lapidary show, DuPage County Fairgrounds, Illinois. Info, 630-983-1744.

MARGARET'S COLUMN



What a beautiful weekend we had for our trip to Ohio! Kathy and Bonnie couldn't have planned it better. We left on Friday (on time), arrived at the motel (also on time), and I think all the passengers were ready to turn in.

Saturday morning was just as nice, and off we went to the road cuts that Matt was taking us to. Everyone was ready for that trilobite, and any other nice fossil we were able to find. It was fun to see the men coming down the road carrying large rocks with fossils in them. The large ones, I am sure, are for the yard. I know the bus groaned with the load of fossil rock that was loaded in the storage compartment.

After going to the second road cut, we returned to the motel to clean up for supper. Bonnie had made arrangements for a really good meal at the college. I believe there were 33 members who ate and visited and really got acquainted with one another. We had Pat and Tom McLaughlin's son join us for dinner; it was good to see him.

Sunday morning was a super day, and off we went to the college museum. We were welcomed to the museum by Joe Marak, who had coffee and cold drinks for us. I am sure all of our group enjoyed the tour. I know I heard, "Oh, look at that, isn't that beautiful?" and "How about that!" It was very nice of Joe to have us again this year. I sent a "thank you" via e-mail on Monday to thank Mr. Marak for his hospitality. I received the following the same day: "The pleasure was mine! It was my pleasure to open the museum for your fine group! I remembered a number of your members from the last visit, and had the pleasure to meet some excellent new people." "I am glad that the weather was fine, and that you enjoyed productive collecting at the Fairfield Causeway. Perhaps you will visit us again next fall? You might mention to those members who like to collect fossils that we have published our fossil catalog on the web. If you would like to check it out, you can find it at <http://www.muchio.edu/~glgcwis/museum/collect.html>. Joe"

After leaving the museum, we went back to the Fairfield Causeway, and trilobites were found, which made many members very happy! I found two noses, nothing else, but at least I did have "trilobite eyes."

Our bus driver wore old clothes and joined in the hunt on Saturday. Gordon Dobecki was with us, and seemed to do better than he expected, with the exertion of hunting for fossils. It was so good to see him again. He belongs to a club out west, but he said he has to congratulate *The Rockfinder* staff for a good bulletin. We were really pleased to have Lauren & Sean Slattery with us. They did a lot of running back and forth in the bus passing out the goodies that Todd and Lynn Miller brought for us to munch on. Thank you very much, Lynn.

We had planned on a couple of films to show on the way down there and also on the trip home, but the VCR ate the two tapes that were to be shown. One tape can be mended, the other was ruined! Oh well, outside of a couple of cuts and bruises, the tape accident was the worst thing that happened.

Phyllis and Herb went down on their own for some camping, but joined us at the rock hunt.

The only business conducted on the bus was a show report given by Bob Heinek. We did real well this year, better than the last two years, thanks to Tom Noe and the silent auction. The Kiddies Korner did real well, too. The door receipts were about the same as the last two years, but the silent auction was really big.

October is officer nomination month, and November is election of club officers, so get your thinking caps on and let Ed Miller know whom to nominate for the year 2000 officers.

See you on the 24th, the 4th Sunday of November.

REGIONAL FEDERATION SHOWS FOR 2000

- SCFMS - May 6-7 Ft. Worth, TX
- NFMS - June 23-25 Monroe, WA
- CFMS - Aug. 4-6 Riverside, CA
- MFMGS - Aug. 18-20 St. Louis, MO
- EFMLS - Sep. 16-17 Harrisburg, PA (tentative)
- AFMS/RMFMS - Oct. 13-15 Moab, UT
- SFMS - No show scheduled.

REVISION TO AFMS CODE OF ETHICS

The September, 1999, issue of the *American Federation Newsletter* contained a revision of the code of ethics. The 12th item, "I will practice conservation...", is an addition to the old code.

All members of the Michiana Gem and Mineral Society are also members of the American Federation of Mineralogical Societies, and we subscribe to this statement of our intent to respect and preserve our natural environment and to keep rockhounding a safe and rewarding activity.

AFMS CODE OF ETHICS

I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.

I will keep informed on all laws, regulations and rules governing collecting on private lands and will observe them.

I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.

I will use no firearms or blasting materials in collecting areas.

I will cause no willful damage to property of any kind, such as fences, signs, buildings, etc.

I will leave all gates as found.

I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.

I will discard no burning materials--matches, cigarettes, etc.

I will fill all excavation holes which may be dangerous to livestock.

I will not contaminate wells, creeks or other water supplies.

I will cause no willful damage to collecting material and will take home only what I can reasonably use.

I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.

I will support the Rockhound Project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.

I will cooperate with field trip leaders and those in designated authority in all collecting areas.

I will report to my club or federation officers, Bureau of Land Management or other proper authorities any deposit of petrified wood or other material on public lands which should be protected for the enjoyment of future generations and for public educational and scientific purposes.

I will appreciate and protect our heritage of natural resources.

I will observe the "Golden Rule," will use good outdoor manners and will at all times conduct myself in a manner which will add to the stature and public image of rockhounds everywhere.



Chemical Fossil Cleaning

Kerosene

Kerosene is a more expensive solvent than gasoline, but is much less flammable. It is also less expensive than solvents such as Stoddards Solution or Varsol. It can be used for removing fossils from many soft shales, siltstones, and limestones with a high silt-clay content (not for hard shales or fissile shales).

1. Dry the rock and fossil at room temperature or slowly heat in an oven. Rapid heating may cause the fossil to break.
2. Place the hot or cold rock and fossil in a container with kerosene. Add enough kerosene to cover the specimen. Kerosene enters the pore spaces of the rock but will not affect its hardness. Allow to stand for a few hours.
3. Pour off the excess kerosene. This can be reused.
4. Add water to the container (rock + fossil + water).

The kerosene will leave the pores of the rock as the water enters. The rock breaks into small pieces and starts forming a mud. After an hour (or a day), the fossil can be removed from the mud and washed. This method works well for separating microfossils (foraminifers, ostracods, conodonts, etc.) from the rocks.

HYDROGEN PEROXIDE

For disaggregating shale surrounding fossils. A bottle of 30% H_2O_2 may be purchased from a local drugstore. Dilute the 30% solution 50-50 with water.

Place wet or dry shale into a container and add enough of the 15% (diluted) hydrogen peroxide to cover the specimen. H_2O_2 decomposes forming water and oxygen gas which bubbles rapidly and the shale is broken into a mud. This is more expensive than kerosene, but will also remove organic matter.

HYDROCHLORIC ACID

To be used when fossils have been replaced by quartz or pyrite and for removal of scolecodonts from a limestone matrix. Works best on limestone or dolostone or rocks having a calcium carbonate cement. Technical grade HCl is called muriatic acid. Care must be taken in the use of HCl, because many fossils are of a carbonate nature and are dissolved by the acid. Very good results can be achieved with a 5% solution of the acid. A 10% solution works faster, but the vigorous bubbling may damage fragile fossils.

1. Place the rock and fossil in a glass, porcelain, or plastic container with a wide opening. Cover the rock with the 5% acid. Reaction with the carbonate produces water, carbon dioxide, and calcium chloride.

2. When bubbling ceases, a small amount of the concentrated acid can be added. A spoon or tweezers can be used to remove the free fossils from the solution.

3. When freed from the matrix, the fossils should be washed thoroughly in water.

Phosphate and phosphatic fossils are also dissolved by HCl. Although the dilute acid poses no serious problems to skin or clothing, care should be exercised and spills should be wiped up with plenty of water. Acid should be immediately washed from the skin.

ACETIC ACID

Acetic acid (the acid in vinegar) can be purchased in photographic supply stores. A 10% solution of glacial acetic acid (concentrated) does very well on the same kinds of rocks as the HCl. However, the reaction is a lot slower, producing less damage to the fossils, but, requiring a much longer time. Some minerals, such as phosphate, dissolved by HCl, are not affected by the acetic acid. Care should be exercised with this acid, as it can cause painful burns to the skin. Rubber gloves are recommended.

CLEANING STAINS

1. Soaking the fossils in a solution of super strength denture cleaner will remove most black, organic stains and will minimize rust or iron oxide stains. This will only take about 10 minutes.
2. Rust stains can also be removed using a solution of stannous chloride, radiator cleaner, or Sani-Flush.

WORDS TO LIVE BY

My face in the mirror isn't wrinkled or drawn,
My house is not dusty, the cobwebs are gone.
My garden looks lovely and so does my lawn.
I think I shall never put my glasses back on.



TWO AWARDS FOR ROCKFINDER

The AFMS announced the 1999 winners in its bulletin awards competition at the national convention in Nashville, July 11. *The Rockfinder* won an honorable mention certificate in the category of small bulletins, and Tom Noe's poem "Wyoming Cycad," from the December, 1998, issue of *The Rockfinder*, received the second-place trophy in the poetry category. Congratulations, Tom. The poem had earlier won an award in the Midwest Federation competition, and so was eligible for the national contest.

Here's the poem again, in case you missed it the first time around.

WYOMING CYCAD

By Tom Noe

Here, at the dry roots of high desert scrub,
Where the sun drops a squinty-thin heat
And pinches sagebrush between half-death and half-life,
These flat smooth fronds lie calmly out of place.
Holding this one in my hand, I smell their sluggish sea.
I glimpse their green crowns stretching in their different sky,
And hear the different buzzes and rasps and scrapes.
Though now it is hard as a scythe, then it drooped above,
In its humid, shimmering air,
In a very different world,
Which was here.



GLACIAL ERRATICS IN OHIO

By Hugh Fulton

What are these big rocks and where did they come from? And how did they get here? Well, let's see, some look to be schistose quartzite and granitic gneiss. Some have garnets and feldspars and other minerals not generally found in Ohio. So they must have wandered in from somewhere else. The term, "erratic," from the Latin word for a wanderer, refers to a rock that has been removed from one place and redeposited in another. Since these rocks are found in the glaciated areas of Ohio, the glaciers must have moved them, probably from Canada, where these types of rocks are found in outcrops.

Well, that was easy. Although glacial erratics have long held an interest for geologists, it wasn't until Louis Agassiz in 1840 brought forth the glacial theory that attention was given to their probable origin. By the latter part of the nineteenth century the glacial theory was widely accepted. By determining the Canadian source areas of the igneous and metamorphic erratica, geologists could plot the ice sheets' southward path to Ohio. Also included in the erratic category are sedimentary rocks of Ohio origin which may have been moved only short distances.

Size is not a factor. Erratics can be tiny, as in sand or in the case of gold dust, and, although very rare, diamonds are also found in glacial sediments. It's the larger boulders that attract my attention. We have collected several "yard rocks with character" in the boulder belt of Ohio. We have also hunted down and photographed some of the big ones.

The largest erratic known to Ohio was a sedimentary one known as the Brassfield Erratic as it consisted of Brassfield Limestone. It was probably only moved 4-1/2 miles. A small limestone quarry utilized the limestone from this erratic at about the turn of the century. The largest igneous erratic was also quarried for stone for 30-40 years in the mid-1800s.

So what is the largest rock in Ohio today? It is known as the Sunbury Erratic, as it is located near Sunbury, in Delaware County. It can barely be seen from the road and is located in the corner of a wooded lot. At one time this erratic was relatively well known, even marked as a point of interest on road maps of the 1930s. My thought on first seeing it was

that it looked like a sleeping elephant--if elephants lie down to sleep. This is a graphite boulder 22 feet long, 18 feet wide and 8 feet high. How much is underground is unknown.

The second largest is much more accessible, and much more colorful, since it is a gneiss boulder located north of Interstate 70 in Warren County. It is probably the only rock with a school named for it. Nearby is a one-room schoolhouse that took its name Rock School from this erratic.

Many large boulders have been put to good use as monuments. Headstones and footstones can be seen in many old cemeteries, making good use of the crystalline erratics.

To farmers in the boulder belt it is a never-ending job clearing fields of boulders that keep working up. Notice the piles in Montgomery, Miami and Champaign counties. The smaller stones are probably the start of most rock collections in the Miami Valley, and are a good way to test our skills in rock identification.

(Editor's note: Indiana has these glacial erratics too.)

Achates (May, 1996)

LABELS

by Roger K. Pabian

As a subject, labels on rocks, minerals, gems and fossils appears to be rather boring. There are a number of reasons to pay attention to what labels tell. To the uninitiated, a label may tell what the specimen is, what it is composed of and where it came from. These are very worthwhile and useful data.

If one is exhibiting mineral or fossil specimens competitively under American Federation uniform rules, one will find out that accuracy in labeling makes up 30 to 50 percent of the scores awarded by the judges. That should be reason enough to be careful. I for one am skeptical about the actual educational value of competitive exhibits. A trophy-winning case will undoubtedly pass on some accurate information to the viewer because the labels are correct. How much information is lost in producing the accurate, picture-perfect label is another story.

Let us create a fictitious specimen--it can be a mineral, fossil, gem or whatever. If the specimen has been properly collected, it should have a field

label. Many specimens will not, as the collector who first obtains the specimen will likely obtain it from a second- or third-hand source. More than likely the specimen will have some label which identifies it and has some additional geographic and geologic data. Properly done, this label will stay with the specimen forever.

For various reasons, labels may not accompany specimens, or much data may be lacking. The specimen may come from a locality which the miner wishes to keep confidential for business reasons. Obtaining a geographic fix may have been difficult in the past but high quality maps and easy to use Geographic Positioning Systems are now available to provide much of this data.

Many collectors prefer to have the history of the movement of the specimen documented through the labels that accompany it. If someone were to offer an agate with the claim that it had been collected by M. F. Heddle in 1889 from the Blue Hole in Scotland, a series of old labels accompanying the piece would furnish proof. Comment cards which accompany the specimens and labels can be utilized to furnish additional information about the travels of the specimen. Information about the specimens that was once confidential can be added to the comment cards as it becomes available in journals.

A very fine specimen can be greatly enhanced in scientific value, historic value and economic worth because its history is preserved in the labels and comment cards.

Sometime back a very old and prominent collection was broken up and sold piecemeal. Many of the finer specimens went to an established museum but many of the lesser specimens were sold as specimens from the famous collection. To the dismay of many purchasers, the specimen was delivered in a shiny new plastic container with a computer-generated label that read: Specimen from the So and So collection. None of the original labels was present--they had all been discarded by the dealer who acted as agent for the sale of the collection. A wise collector will keep all the labels that came with the specimen and will generate new comments as data becomes available. The neat labels will be kept for show but the old ones will always stay with their specimens.

The Pick and Shovel (Mar., 1999)

MICROMOUNTING

Good things do come in small packages!
By Steve Reutlinger

I just added an emerald specimen to my collection. It's from the classic locality in Chivor, Colombia. It is a single loose crystal with perfect form and an undamaged termination. It is a lovely shade of green and is so gemmy that I can read through it! How much did this fabulous crystal set me back? \$100?, \$500?, \$1000? Hardly—I got it for a buck! That's right, just one single dollar. OK, so it's only 5 mm. tall x 1.5 mm. wide, but when I look at it through my new stereomicroscope it looks two inches tall and is absolutely stunning.

This is typical of the crystal perfection and affordability of micromounts. After becoming interested in the rare phosphates of the Palermo pegmatite in North Groton, NH, I happened to meet Jim Warner, the president of the Micromounters of New England. Inspired by his obvious enthusiasm, I became very interested in micro-mounting and decided to see what all the excitement was about.

Micromounters are quick to point out the fact that almost all the new mineral species being discovered are micro-sized specimens and that a good majority of the known mineral species occur only in micro-sized crystals. Certainly most of the rarer species are micro-sized, but it wasn't that which initially interested me in micromounting. We all know that smaller crystals tend to be more well formed and often gemmier than their larger-sized cousins, and this is especially true in the micromount-sized specimens. I have a specimen of pyromorphite from Broken Hill in New South Wales, Australia. It is a thumbnail-sized specimen and on the specimen there are easily dozens of lime green, perfectly formed, terminated crystals of pyromorphite. It is a thrill to see, and a comparable quality specimen in a miniature or hand-sized piece would undoubtedly cost me hundreds of dollars. That one cost me a bit more than a buck, but not much. I have a specimen of turquoise crystals—yes, turquoise crystals, from Notodden, Norway. The sheaf-like crystal aggregates are a gorgeous shade of deep, bright blue, and are quite gemmy and lustrous. Just try to find one like that in a hand-sized specimen. With the help of my new friends at the micromounting club I have put

together a nice little suite of rare phosphate minerals from Palermo which you just couldn't assemble in hand-sized specimens, no matter how much you cared to spend. Bright blue bladed crystals of vivianite; water-clear, gemmy rhombs of whitlockite and other phosphates for which Palermo is known the world over.

The one item that you need to appreciate the true beauty of micromount specimens is a decent quality stereomicroscope. I'd been looking for a used one in the \$350-500 range and recently got one through a trade that I made. So, if you'd like to enjoy the crystal perfection and affordability of micromounting, look into it. I highly recommend it as a fascinating part of the mineral collecting hobby.

Keene Mineral Club Newsletter (No date given)

THE CRYSTAL I SEE

By Ed Dewindt-Robson

One person looks at a crystal and sees chemistry in action.

Another sees art by Mother Nature.

One sees entertainment for an inquisitive and hyper-active child.

Another sees a metaphysical channel toward inner peace.

One sees rough for faceting.

Another wraps it reverently lest it get scratched.

One sees a way to teach geometry to bored teenagers.

Another sees the signal detector for a crystal radio.

One sees a commodity in demand.

Another sees evidence of the hand of God.

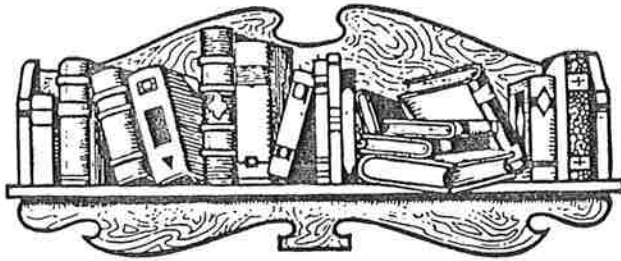
One sees a specimen to put in a box.

Another sees a treasure, and offers a prayer of thanks.

All these people are members of this list. All belong here, because they all agree that a pretty rock is something of value, something worth learning about, talking about, taking time to dig for, or spending money to buy.

If they all start arguing about who has the right reason for treasuring minerals, or insulting anyone who sees the crystal in a different light from theirs, we will have lost the common ground which brought us together.

The Rockhounds Mailing List (Apr., 1999)



FOR FURTHER READING....

On the main island of the Fiji archipelago, paleontologists have begun finding fossils of large extinct creatures, probably between 20,000 and 25,000 years old. Included are a flightless pigeon which looked something like a dodo, a giant tortoise and a giant land crocodile. Similar fossils had been found on islands on either side of Fiji, but this is their first occurrence on the island. Scientists suspect that crocodiles dragged the bones with them into the limestone caves to finish their meals.

New Scientist (no date)

Michael Parrish and colleagues at Northern Illinois University have modeled the skeletal traits some of the long-necked dinosaurs such as *Diplodocus* and *Apatosaurus*. Their findings indicate that it would have been difficult for them to reach their heads much above the rest of their bodies. So, they might have been primarily grazers, rather than lifting their heads to chomp off the branches of trees. Could they stand on their hind legs?? Perhaps, but Parrish says that would cause blood pressure problems.

Science (Apr., 1999)

Some evidence has surfaced that plesiosaurs ate ammonites. A fossilized plesiosaur from Japan contained about 30 ammonite jaws where its stomach would have been--a very high and unusual concentration. Assuming the plesiosaur gulped the ammonites whole, and stomach acid preferentially dissolved the other parts, it looks as if it was dog-eat-dog 93 million years ago--at least in Japan.

Discover (Nov., 1998)

The earliest known flower has been found in China, dated to 142 million years old. It has peapod-like enclosures which contain seeds.

Science (Nov. 27, 1998)

ORIGIN OF THE WORD "STERLING"

The word "sterling" came from the "Easterlings," which was the name of a band of traders in eastern Germany in the 14th century. These traders came from five free towns where the people made not only their own laws but their own currency. In trading with English merchants, they gave silver coins as payment. The English learned that the coins, which were referred to as the coins of the Easterlings, could be depended upon to contain 925/1000 fine silver. The original designation, Easterlings, was later abbreviated to sterling.

PEGMATITE 11/76



Flesh on the bones: a sauropod's tail would have made a perfect whip