

# THE ROCKFINDER

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



# THE ROCKFINDER

NOVEMBER, 2000

# MICHIANA GEM & MINERAL SOCIETY

## 2000 BOARD OF DIRECTORS

President: Margaret Heinek 654-3673  
 Vice-Pres.: Don Church 616-651-7616  
 Secretary: Gladys Pacholke 233-6818  
 Treasurer: Bob Heinek 654-3673  
 Liaison: David Peltz 616-683-4088  
 Past Pres.: Jim Russell 289-7446

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.



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 \_\_\_\_\_  
 Cabochons \_\_\_\_\_ Field Trips \_\_\_\_\_  
 Faceting \_\_\_\_\_ Crystals \_\_\_\_\_  
 Carving \_\_\_\_\_ Micromounts \_\_\_\_\_  
 Other \_\_\_\_\_ Jewelry Making \_\_\_\_\_

Name \_\_\_\_\_

Street \_\_\_\_\_

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

## HEADS OF COMMITTEES

Programs Don Church 616-651-7616  
 Hospitality Pat McLaughlin 259-1501  
 Educational Emily Johnson  
 Librarian Diane Gram 272-6885  
 Historian Ed Miller 498-6513  
 Sunshine Sally Peltz 616 683-4088  
 Publicity Phyllis Luckert 282-1354  
 Field Trips Kathy Miller 291-0332  
 Membership All Members

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:

Name \_\_\_\_\_

Birthday \_\_\_\_\_

Name \_\_\_\_\_

Birthday \_\_\_\_\_

Name \_\_\_\_\_

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

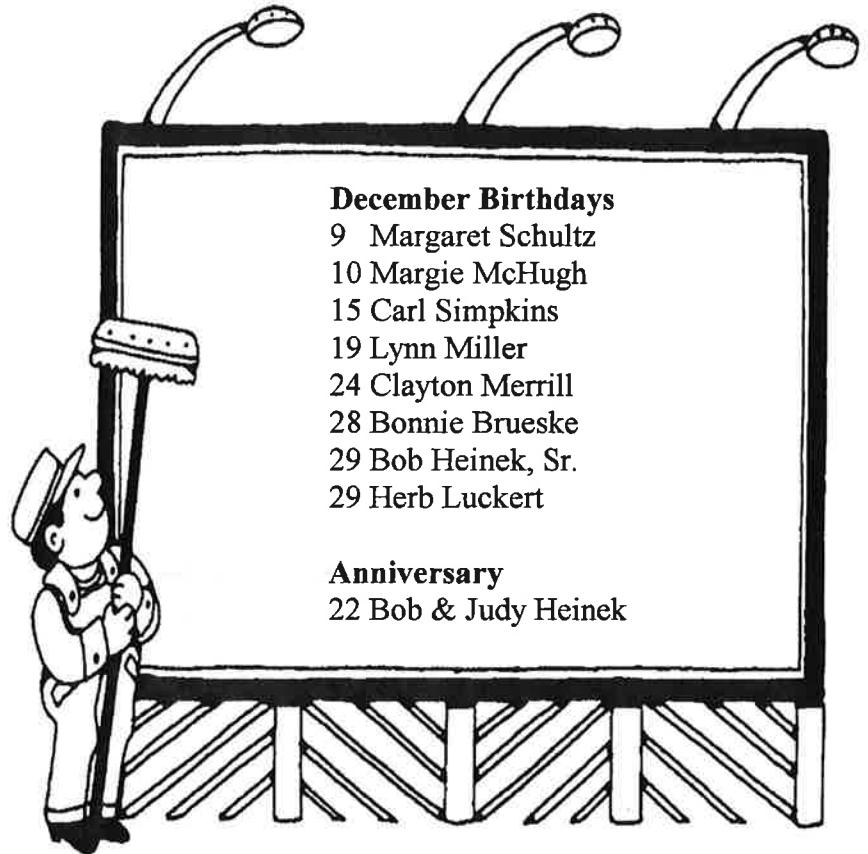
Volume 40, Number 9

November, 2000

**Meeting:** No meeting in November.  
The combined November/  
December meeting is Dec. 3.

**Place:** Our Redeemer Lutheran Church  
805 S. 29<sup>th</sup> St. (29<sup>th</sup> & Wall)  
South Bend, IN

**Program:** Election of officers, book  
sale and Christmas Party.



## 2001 Dues Should Be Paid Now.

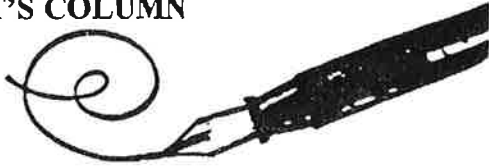
Dues for next year can be paid anytime before January 1. You can send a check to Margaret with the correct amount, as shown inside the front cover of this newsletter. Include your birthday if you want it noted in the *Rockfinder*.

You may pay dues at the Christmas party, but let's make it easy on Bob Heinek and bring checks, not cash.



**HAPPY  
THANKSGIVING**

## MARGARET'S COLUMN



The weatherman just reported that we are in for colder weather, and maybe some snow in a few days. We have had such a wonderful fall, but I know we have to have winter. Just stay well. Have you had your flu shots?

Bob and I would like to wish you and your family a wonderful Thanksgiving. I am looking forward to a taste of turkey, and all of the fixings.

Our next get-together will be our Nov/Dec meetings, the Christmas Party, on December 3rd. We will have chicken, and PLEASE CALL AND LET US KNOW IF YOU ARE COMING. WE NEED A COUNT AS TO HOW MANY WILL ATTEND. Other years we have too much, or run short of meat. Call me before the first of December so I can make arrangements to get it prepared.

We will have a cheese and punch table, hosted by Pat and Tom McLaughlin. Kathy and Bob Miller, along with members, will decorate the tree and tables. If you want to help with this on Saturday before the party, call Kathy and see if she needs help. Each family will bring a dish of food to share. Please bring your own plates and silverware. We will have a gift exchange. Wrap your gift, mark it for man, woman or child. If you do not care to exchange, don't feel bad, as this is a voluntary activity. The gift should be rock-related, with a value of \$3.00 or a little more.

One of our show dealers, Wanda Snyder (Slinger's Snob Appeal), was in a motorcycle accident recently. She suffered broken bones and her husband was in intensive care for quite a while. Jim Russell informed us about this, and said a car cut in front of the motorcycle which caused the accident.

There will be a "Christmas Show and Sale" in Wheaton, IL., on Friday, November 24<sup>th</sup> through Sunday, November 26<sup>th</sup>. It will be held at the DuPage County Fairgrounds, 2015 W. Manchester Rd, Wheaton, IL. Take I-80/94 (W) to I-88 exit Naperville Rd. (west) to County Farm Rd. (N) to Manchester Rd. right (west).

Diane Gram and other members are going through our library books, and will have some for sale at the December party. So bring extra money or

checks, to get that book you are interested in for yourself. Bob and I have some magazines you may be interested in, for free, to take home with you. It sounds like this will be a busy day, what with the book sale, election of officers, dinner and visiting.

I sincerely hope we have good weather, no BIG snow storms that day, so we can get together. See you there!

## AGATIZED CORAL

By Wilma Bonar

Agatized coral in many forms and colors is found all over Florida. Sometimes these heads are solid; some, such as around Tampa Bay, are hollow and are properly called geodes. Agatized coral is scientifically identified as "chalcedony, pseudomorph after coral," because one mineral has been replaced by another.

Millions of years ago, these "rocks" were colonies of little animals belonging to the phylum coelenterata. One of the anthozoans, they grew as polyps. Coral is the name of the limy skeleton within which they enclose themselves. It is also a fossil.

Diluvial action (a flood) of some kind covered these colonies of animals. This water contained other minerals. Over a long period of time, the carbonate of lime skeleton was replaced by quartz. This form of quartz is called "chalcedony." The geodes found in the Tampa area may have centers colored red, blue or black, and varying size quartz crystals. In the northern part of Florida, solid heads of various shades of yellow, banded with blue or black, have been found. Beautiful specimens are found on the Caladesi Causeway. Other beautiful specimens have been found in the Perry area—Econfina and Buckeye. The crystal heads of northern Florida differ from the Tampa Bay heads. While heads have been found in all areas, no fingers have been found in the northern Suwanee basin. Many enhydros are found, sometimes in salt water, but the water contained in them is always fresh.

Heads and fingers are highly prized as specimens. Smaller pieces are made into jewelry. They have come to be called "Ballast Point diamonds" because they were first found in quantity at Ballast Point. To coral lovers their beauty rivals that of the diamond.

original source unknown, via *Osage Hill Gems* (Mar., 1996)



## MINUTES OF THE OCTOBER 22 MEETING

President Margaret Heinek called the meeting to order at 2 p.m. Present were 21 members, no junior members and no guests.

The hospitality committee consisted of Sam Shapiro and Pat and Tom McLaughlin, who decorated the refreshment table with ivy and a variety of autumn colors. Refreshments included the always popular candy corn and tasty cookies. Many thanks.

Margaret opened the floor to old business and David Peltz made a motion that the minutes of the last meeting be accepted as printed in the *Rockfinder*. Bob Miller seconded the motion and it was approved unanimously.

Treasurer Bob Heinek read his report on the society's finances, which are in good shape. It will be filed for audit.

Tom Noe, editor of the *Rockfinder*, then showed the certificate awarding our newsletter fifth place in the annual newsletter competition sponsored by the Midwest Federation. Everyone was suitably awed.

David Peltz noted that several new videotapes are now available from the Midwest Federation.

Margaret announced that we have sold all our extra copies of the geological road guides for Illinois and Indiana. We have one copy of each in the club library for use by the members.

Everybody who went on the field trip to Grand Rapids expressed their enthusiastic appreciation to Kathy Miller, who organized the trip.

Under new business, Don Church suggested that we have a book sale to members at the Christmas party/meeting. He said that a small committee of members would arrange to go through the library and select books that are not needed. These will be offered for sale to members, and the rest can be sold through the auction or the club table at the April show.

We discussed whether to have a gift exchange at the Christmas meeting. Kent Hoffman made a motion that we have one for those who wish to participate (not required) and Sally Peltz seconded the motion.

Pam Rubenstein made a motion, seconded by Kathy Miller, that we ask Mike Slattery to look into

the possibility that South Bend School City might want to cooperate with us in some way to bring busloads of students to one of the shows. Don Church had described the success of this kind of program at the Three Rivers club show in Fort Wayne a few weeks ago. This would mean several changes in the show schedule, which would involve cooperation from the dealers, but the motion was made to see whether the proposal is feasible before taking any further steps.

Kathy Miller offered some options for next year's field trip. Should it be a one-day trip or the traditional weekend trip? The Mazon Creek fossil areas in Illinois are a possibility.

Refreshments followed the business part of the meeting, then people had a chance to see the various displays that members had brought in--some from summer travels to Utah and Oregon, others from the recent field trip. Following the refreshments, new member Heidi Santarelli showed some of her beadwork and gemstone jewelry and gave a very interesting demonstration on how to make it.

Note, the December meeting and the November meeting are combined on the first Sunday of December. It is also the Christmas party, AND the election of officers for next year, PLUS the book sale and gift exchange.

Gladys Pacholke, Secretary



Tom doing some last-minute work on the *Rockfinder*.

## *Annual Christmas Party and Meeting*

All club members are invited to attend the 2000 Christmas party and meeting! As you recall, last year we made a decision to combine the November monthly meeting with the December Christmas party, instead of having two events so close together. The new schedule is to skip the November meeting and put a small business meeting into the December party. However, this is a very important business meeting, since we will be electing new officers for 2001.



### *Attend the Party in December*



Where? The usual meeting place, at the Lutheran church. When? December 3, gather at 1:30 for socializing and punch.

The meal starts at 2:00.

Why? Who needs an excuse to have a party?

What else? Dress nicely, bring a rock-related

the gift exchange, value of \$3.00 or a little more. Indicate on the gift whether it is most appropriate for a man or woman or anyone.

What to bring? The club will provide the meat and drinks. Please bring your own table settings and a potluck dish.

Is that all? No, **call Margaret beforehand (219-654-3673) to let her know how many to plan for.** Everybody welcome!

**Call Kathy Miller if you'd like to help set up for the party by decorating tables on Saturday morning--219-991-0332.**

Even more? Yes, at the party you will have the opportunity to purchase books which we are removing from the club library.

## EUGE COPPER BOULDER FOUND IN U.P.

A copper mass almost twice the weight of the famous Ontonagon Boulder is now on display at Keweenaw Gem and Gifts in Houghton.

Mark Mattfolk, a logger from Dollar Bay, accidentally uprooted the 8,640 pound float copper mass with a bulldozer while working near Senter Point Road in July.

Keweenaw Gem and Gifts president Ken Flood said the boulder is one of the largest float copper masses on display in the area. It measures nearly seven feet long and five feet across.

"It also has interesting holes and marks compared to other float copper on display," Flood said. "Most copper masses are very two-dimensional and flattened like a pancake. This one is very three-dimensional and shows the jagged and knobby areas."

Small, rocky rubble and soil—picked up from ancient glaciation—remain on the boulder. Glacial movements thousands of years ago altered the geological deposits of native copper by moving them away from their natural origins.

"This mass was probably tumbled or rolled into the area from under Lake Superior or the Isle Royale area," Flood said.

"Finding copper masses is rare, but it won't be the last time any copper is found in the topsoil," said Stan Dyl, Director of Michigan Tech University's Seaman Mineral Museum....

Rather than preserving the Dollar Bay boulder in a glass case, Flood wants it on display for the community so people can "get a feel for what a large piece of float copper is like."

The shiny gold and green oxidized rock now sits atop a collection outside the gift shop on West Memorial Drive. Flood paid Mattfolk \$1 per pound for the specimen—visitors are welcome to view and touch it.

Flood said the boulder allows the Keweenaw to hold on to some of its history. "So much of the area's copper was purchased, melted and sent away," he said. "It's good to still retain some in the area."

*The Daily Mining Gazette* (Nov. 18, 1999)

## GEMSTONE IDENTIFICATION

by Will Smith, CM

We identify gemstones using simple methods available to each of us. Clove oil has the same refractive index (1.54) as quartz, and cinnamon oil has a refractive index (1.60) close to topaz (1.61) and tourmaline (1.62 - 1.65). You can have the pharmacy order it for you, or, if you check around at some of your local drugstores, you may find it. It is the oil used for candy making and not very expensive. If you use it, it will refresh shop air, making it smell like clove candy.

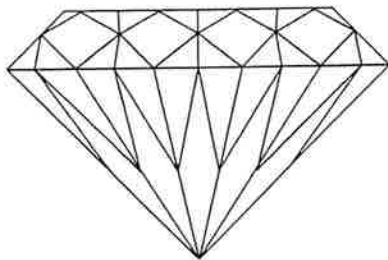
I could not wait to try the oils, since I had some rough which was with the old faceting machine I purchased a number of years ago. I knew the person who had owned the machine liked to cut both glass and expensive material, so I wanted to know what I had. Also, I buy a lot of old diamonds, and one piece of rough which he had started faceting had that diamond look.

By placing each piece of rough in the clove oil, the color and outline of the quartz material will disappear in the oil and only fractures could be seen (they jump out at you). I was surprised that a piece of green material which I thought was glass turned out to be quartz. A piece which I thought was topaz was quartz and a small clear piece was still in question.

Well, when put in the clove oil, the outline stood out the same as in air and the same for cinnamon oil. I have to tell you, I was a little suspect of what the oil was telling me (a very high refractive index), so I cleaned the stone and put it on the refractive index meter. It was about 6 mm., so the table was small and I did not get a reading the first time. The second time I got the table correctly over the little hole in the meter and the meter started rising. It went past quartz (1.54), past beryl (1.75), past corundum (1.77), past zircon (1.94), past CZ (2.15). Was it ever going to stop? It settled down on 2.41, which is the index for diamond. Yahoo!

That 89¢ bottle of oil helped me discover a diamond in my basement. This was better than any field trip I've been on. What's in your boxes? Buy some oil, freshen the air, and discover what's in your shop.

*Mid-Tenn Gem'ers* (Feb., 1999)



## MOISSANITE--THE NEWEST DIAMOND SIMULANT

By K. M. Dave

Moissanite is another name for silicon carbide (SiC), also known as Carborundum. Silicon carbide is used as an abrasive material in many applications.

Lapidaries use it in the form of grinding wheels, on sanding paper, or in a powder form. Single-crystalline silicon carbide has been synthetically produced for use in high-performance military semiconductor and electronic components for many years.

Natural silicon carbide was discovered by French Nobel Prize winner Dr. Henri Moissan while analyzing the Diablo Canyon meteorite in 1893. The mineral name for silicon carbide, moissanite, was given in his honor in 1905. Moissanite is found naturally in tiny amounts in meteorites. In its natural form, it is usually dark green, brown or blackish in color and is found in amounts too small to be faceted as a gem. It is extremely rare.

In 1995, a master diamond-cutter in North Carolina saw silicon carbide samples that looked like green diamond, and suggested that a colorless form of moissanite could be an alternative to diamond. C3 Inc. and Cree Research, Inc. are now producing synthetic moissanite that is near colorless and can be cut for jewelry.

When properly oriented and well cut, moissanite strongly resembles diamond. According to the Gemological Institute of America, man-made moissanite displays the equivalent of I-K diamond color grades and is from VS1 to eye-clean.

Similarities between moissanite and diamonds are significant. Moissanite's hardness is 9.25 on the Mohs scale, diamond's is 10. Moissanite's refractive index is closer to diamond than is cubic zirconia's.

There are already reports of moissanite being sold as real diamond. Its high thermal conductivity

transmits the same readings as diamond on thermal conductivity-based diamond testers.

There are three ways to tell them apart:

1. Look carefully and closely. Moissanite is doubly refractive. Double lines can be seen at the facet junctions using a 10x loupe. Look through the crown facets, not through the table (the table is oriented on the optic axis). The surface has a non-diamond-like polish and the inclusions differ.
2. Measure the specific gravity. Moissanite floats in a specific-gravity fluid calibrated for a density of 3.32, while diamond sinks. This is the most accurate way to distinguish between the two for loose stones. (Specific gravity is the density of a substance divided by the density of water. Specific-gravity fluid calibrated for a density of 3.32 can be purchased.)
3. Purchase a tester. There are two types of moissanite testers available. One measures electrical conductivity. The other uses the properties of UV light reflection/absorption. (Diamond absorbs and moissanite transmits light in these wavelengths.)

Moissanite is not cheap. Its about 1/10 the price of an equivalent diamond but CZ is about 1/10 the price of moissanite. The following is a sample comparison of the costs of a basic engagement setting.

Cubic Zirconia	Moissanite	Diamond
1 carat: \$125	1 carat: \$500	1 carat: \$4,000
2 carat: \$145	2 carat: \$700	2 carat: \$7K to 10K

Information derived from personal communications from Grimball & Stokes Jewelers in Chapel Hill, North Carolina, and Impostors in Raleigh's Crabtree Valley Mall, North Carolina.

*The Opal* (Sep., 1999)





## HISTORY OF OPAL

By Margaret Heinek

Opal has a long history, with opal artifacts several thousand years old having been discovered in a cave in east Africa.

The Romans established opal as a gemstone, obtaining their supplies from traders in the Middle East, and thinking the gem came from India. The Roman name "opulus" is based on an ancient Indian word "upala," meaning "precious stone."

The opal sought by Rome probably came from open pit mines in Hungary, which remained the only source of European opal until the Spaniards came back with many fine examples of Aztec opal.

The Australian opal appeared on the market in the 1890s, with the Hungarians promoting the idea that Australian opal was not genuine. This was because gems with the brilliant fire had not been seen before.

Johannes Menges, a German geologist, first discovered opal in Australia in 1849. Lightning Ridge opal was not found until 1905, Coober Pedy in 1915. Then in 1946 major new finds increased spectacular production.

Opal is a form of silica, chemically similar to quartz, but containing water within the mineral structure. Precious opal contains from 6 to 10 per cent water and consists of small silica spheres arranged in a regular pattern. In potch opal, the silica spheres may be absent or too small to produce color.

All precious opal in South Australia occurs in rocks affected by weathering during the Tertiary Period (1.8 to 70 million years ago). The weathering process broke down minerals of the country rock to produce kaolin and soluble silica, creating cavities by dissolving out minerals and fossil shells. These cavities, together with faults and fractures, provided pathways for underground water to enter the openings that contain the silica. With periodic lowering of the water table, possibly caused by changes in climate, the silica-rich solutions are carried downwards to deposit opal in the rock cavities.

The opal field at Coober Pedy was discovered in 1915 by a 14-year-old boy camping with his father's gold prospecting party. By 1916, Big Flat was established as the principal field.

Other sites have produced opal: white miners discovered Andamooka and Mintabie (this is the area the aborigines collected black opal and sold it at Coober Pedy) in the 1920s.

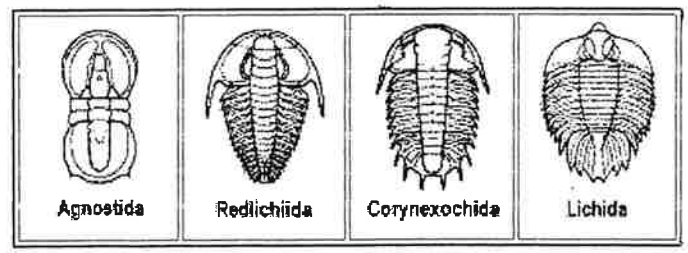
Opal is one of the few minerals that can still be extracted economically by a miner working alone. The simplest form of mining is by shaft sinking with a pick and shovel. When opal is found, a handpick or screwdriver is used. Since the 1970s, there has been a rapid increase in the use of mining machines. Tunneling machines with revolving cutting heads and small underground front-end loaders, called boggers, have been introduced. Many of the miners, after making their tunnels, live in the underground dugout.

Tourists are able to "fossick" (search for minerals as a recreation) at Mintabie after getting permission from the government. Many locals search through the heaps of discarded "mullock" (waste rock) and it is popular with the tourists.

Acknowledgments: Southern Cross Opals & Australian Gem Industry Association, (S.A. Branch). Further reading: *South Australia's Gemstone*, which gives detailed descriptions of South Australian opal occurrence, the geological formation of opal, and current mining methods.

How many trilobites are there anyway??

Go to <http://www.aloha.net/~smgon/triloecology.htm>



I was admiring a necklace made of alligator teeth when its owner declared, "It's more valuable than pearls!" I asked why. She replied, "Anyone can open an oyster!"



**NEW HERKIMER LOCALITY OPENS**

By Dean Lagerwall

The Treasure Mountain Diamond Mine in Little Falls, NY, has been opened as a fee site (as of Memorial Day Weekend). The smoky scepter quartz crystals that are found at this site are truly unique and beautiful (see recent *Mineralogical Record* for picture). In addition, jewelry quality crystals (with and without anthrazolite inclusions) and large "klunkers" can be found here, depending on the part of the mine in which you dig. The calcite crystals (can be larger than a fist) found here often have perfect diamonds inside.) This locality has typically hard Herkimer rock but the amount of overburden is much less than that of the more popular Middleville, NY, mines. Thus, some hard work is required to get the desired scepters. However, because the diggings are closer to the surface, some cracks are in the rocks and wall mining is slightly eased. There are (as of yet) no signs of huge vugs full of crystals as found at Middleville, but this is one of the few localities where these unique smoky scepters can be found.

To reach this promising locality, from the NYS Thruway take exit 29A (Little Falls). Go through the toll booth and travel about 1/4 mile. Turn left onto route 169. Go another 1/4 mile and turn right on State Route 5S. Go 1.9 miles (up the hill) and the entrance will be on the right (barn next to 3 silos). This barn is the office and is open from 9 a.m. to 6 p.m. daily through November. Cost to collect is \$10.00 per person.

*Geolletter Geological Society* (1999)

**EMBARRASSING PREDICTIONS**

"I think there is a world market for maybe five computers."-Thomas Watson, chairman of IBM, 1943

"I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year."--The editor in charge of business books for *Prentice Hall*, 1957

"But what...is it good for?"--Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.

"There is no reason anyone would want a computer in their home."--Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977.

"This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us."

--Western Union internal memo, 1876.

"The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?"--David Sarnoff's associates in response to his urging for investment in the radio in the 1920s.

"The concept is interesting and well-formed, but in order to earn better than a 'C,' the idea must be feasible."--A Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)

"Who the hell wants to hear actors talk?"  
--H.M. Warner, Warner Brothers, 1927.

"I'm just glad it'll be Clark Gable who's falling on his face and not Gary Cooper."--Gary Cooper on his decision not to take the leading role in *Gone With The Wind*.

From Lori's Humor Page