

# THE ROCKFINDER

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*Larry Hess, Editor  
Michiana Gem & Mineral Society  
15358 Kerlin Drive  
Granger, IN 46530*

**\* \* \* NOTICE \* \* \***

***Your annual MGM***

***DUES***

***are due.***

***Please return the  
form on the back  
side back of this  
cover sheet.***

# MICHIANA GEM and MINERAL SOCIETY

## 1994 BOARD OF DIRECTORS

President	---- Margaret Heinek	7091 E East Park Ln, New Carlisle IN 46552
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Sunshine	---	Molly Elwell	105 N Ironwood Dr, South Bend IN 46615
Display	---	Mary Miller	451 S Illinois St, South Bend IN 46619
Publicity	---	Dawn Cytacki	1606 E Madison St, South Bend IN 46617
Membership	---	All Members	

The Michiana Gem & Mineral Society, a non-profit organization, is affiliated with the Midwest Federation of Mineralogical and Geological Societies and with the American Federation of Mineralogical Societies.

## Regular Meetings

Time:	2:00 PM EST	Place:	Wesminster Presbyterian Church
	4th Sunday of each month		1501 W Cleveland Road
	June - Field Trip Meeting		South Bend IN
	July - No meeting		just west of the St Joseph River
	August - Annual Club Picnic		
	December - Christmas Party		

## ROCKFINDER STAFF

Editor	Larry Hess	15358 Kerlin Dr, Granger IN 46530
Co-Editor	Margaret Heinek	7091 E East Park Ln, New Carlisle IN 46552
Staff	Bob Heinek / Club Members	

All contributions for publication should be in the hands of the Editor by the 10th of each month. (219 272-5431) Permission is hereby granted to reprint, at any time, items published in the ROCKFINDER provided due recognition is given.

cut

## Membership Dues are:

_____ Individual	\$ 6.50 per year
_____ Family	\$ 10.00 per year
_____ Junior	\$ 2.00 per year

Please send your dues and this form to  
Michiana Gem & Mineral Club, Treasurer  
Marge Collins  
3017 Niles-Buchanan Rd  
Buchanan MI 49107

Please make address corrections to the mailing label on the reverse side and fill in the optional information below. Your Birth Mo/Yr \_\_\_\_\_

## Check your SPECIAL INTERESTS:

General Geology	_____	Gems & Minerals	_____	Fossils	_____	Artifacts	_____
Cabochons	_____	Faceting	_____	Silversmithing	_____	Carving	_____
Micromounts	_____	Beads	_____	Other	_____		

## Family Members include information on spouse and children:

Name	_____	Birthday	_____	Will attend meetings	_____
Name	_____	Birthday	_____	Will attend meetings	_____
Name	_____	Birthday	_____	Will attend meetings	_____

# THE ROCKFINDER

Volume 34  
Number 2

February 1994

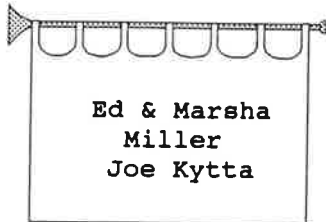
Published by:  
Michiana Gem & Mineral Society

**Meeting:** Meeting: February 27, 1994  
Doors Open 1:30 PM  
Meeting at 2:00 PM

**Place:** Westminster Presbyterian Church  
1301 E Cleveland Road

February Program:  
Packet preparation for the 1994  
Convention. This is a BIG job, so  
please come and help.

**Hosts:**



February Birthstone - *Amethyst*:  
Amethyst is the most highly prized variety of  
quartz. The name amethyst comes from the Greek  
word "Amethystos", meaning not drunk. This  
beautiful purple gem is used abundantly in  
fine jewelry.



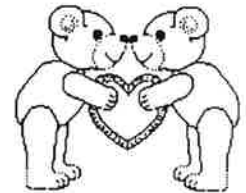
## February Happy Birthdays



3 Cathrine Dahlquest  
5 Sister Jeanne Finske  
6 Zella Krump  
8 Marcelle Nagy  
10 Jimmy Krump  
18 Al Nagy



## Calendar of Events:



Mar 12-13 Geodeland Earth Science Clubs  
Mineral & Gem Show  
Macomb IL - WIU Student Union  
Jane Huelsmeyer 217-434-8655

June 17-19 29th Ann. Gem & Mineral Show  
Lawrence County Rock Club  
Bloomington IN  
Margaret Kahrs (812) 522-6093

Mar 26-27 Gem & Mineral Show  
Des Plaines Valley Geol Soc  
Rand Park Field House  
Des Plaines, IL

June 25-26, MGAG - Rockhound Seminar  
Southwestern Michigan College  
Niles Michigan (313)664-8985

Apr 9-10 Central Ohio Show  
Columbus Rock & Mineral Soc  
Columbus Ohio  
Calrton Davis (614) 451-3252

April 8-10 California Federation, DelMar CA  
June 3-5 Northwest Federation, Ogden UT  
June 23-26 South Central / AFMS, Houston TX  
July 8-10 Rocky Mountain, Rapid City SD  
Sept 2-4 Midwest Federation, South Bend IN



**Margaret's  
Column**

Hasn't this been an unusual winter? So many years since we have had this much cold weather and lack of sunshine. Oh well, it will be Spring before we know it. All I wish is, that I had some of that 104 degree weather we experienced at Williamsburg VA in July.

The Michiana Gem Club received a "Thank You" and an acknowledgement of the History Brick order. We also received a thank you for the donation to the MWF Endowment Fund in the name of Joyce Larson. We have a credit of \$53.00 toward the next 100% in the Endowment Fund. The only problem, the treasurer thought Joyce was my sister. I will write to her and let them know I appreciate the thought, but that she was the Society's Editor.

Our program this month will be stuffing the packets to send out for our September Convention and show. Everyone can help, including the Juniors. So come prepared to work.

There have been several members and some of their family that have been ill this month. Marge Collins' mother fell and broke her pelvis. We sincerely hope that she heals fast and will be out of the hospital soon. Marge said she was in the Niles Hospital. Mollie Elwell's mother was in the hospital, but is now in a nursing home for a while. Catherine McHugh is resting at home, and one of her daughters is with her for a while. Paul Godollei's mother has been in the hospital also. We sincerely hope she will be back at home soon. Several members have had colds and similar ailments; get well soon. Even the youngsters have had their troubles! Tooth aches, colds and allergy.

What we need is warm weather, and a good field trip/bus trip. I checked on a weekend trip to the southern Indiana Bloomington area. Cardinal quoted on a 41 passenger bus for a Saturday and Sunday, the cost would be \$1065.00, plus the driver's motel cost. We would have 60 miles to "play with" to go rock hunting, and if it was more than the 60 miles, there would be an additional cost. The dates would be to attend the swap at the fair grounds. Members would have to pay for one nights motel for themselves, plus some of the bus cost, according to how much the club would pick up.

I understand that the Lizzadro Museum has added a new gift shop and new displays. This is always a good trip. Think about it. If anyone would like to plan a trip, please speak up and take care of the details.

See you at the meeting on February 27. Happy Valentines Day!

*Margaret*

P.S. -- Please remember that DUES are DUE. The club roster will be printed early in March. To be included, your dues must be paid by the next meeting. Thanks!

The Science Alive program included about thirty five exhibitors and we had a wonderful turnout. Nearly two hundred children polished Petoskey Stones and many more visited our tables and fluorescent minerals display. Thanks to everyone that helped and donated materials.

We are very fortunate to have Gordon Dobecki's support for our Club Shows and the Science Alive programs. His time and lapidary equipment are really appreciated and very popular with the kids. Recently Gordon had a motor burn out on that equipment and the club could purchase a replacement motor.



**SECRETARY'S  
REPORT**

**MINUTES OF THE JANUARY 1994  
MICHIANA GEM & MINERAL SOCIETY**

President Margaret Heinek opened our regular meeting. The December minutes were accepted as printed in The Rockfinder. The treasurer's report was filed for audit. Members Catherine McHugh and Marilyn Meier were greeted.

Committee Reports

Program - Ed Miller will show slides of the 1993 MWF convention in Houghton, Michigan.

Display - Ed Miller brought in photographs. The Heineks brought Indiana geode fossils.

Sunshine - Molly asked if members had extra cards she could use to save the club the cost of purchasing some. It was reported that former member Lucille Lindler from Washington state passed away 2 weeks ago.

Old Business

The members discussed buying a paving brick for the Historical Museum. It was moved, seconded, and passed that we spend \$250 for one.

1994 show report - Chuck Collins reported that 21 dealers have signed up for the September show and 14 have sent in deposits. He stressed the importance of advertising and asked members to take fliers and post them in as many places as possible.

New Business

Lorraine Jordan has agreed to serve as our hostess chairman.

Science Alive will be held Sat. Feb. 5 at the main library in South Bend. Workers are needed and welcomed! Chuck Collins will install a black light and we will display fossils and give handouts advertising our fall show. Gordon Dobecki will let children polish rocks.

Marge Collins brought up the subject of joining the Michiana Arts and Science Council. It was moved, seconded and passed that we join for the \$100 fee.

We again discussed a 2-day bus trip to southern Indiana. Margaret will look into the costs and feasibility and report back to us.

Meg Auth presented her pattern for the 1994 show pin. Margaret will send for prices and then the pins can be ordered.

25 members were present.

Respectfully submitted,

**Pam Rubenstein**



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**Michiana Gem & Mineral Society  
Membership Roster Update.**

(New members, renewals, roster errors, address changes, etc.)

Ronald Douglas  
27478 Pine Lake St  
Edwardsburg MI 49112  
(616) 663-8870

Terry House & Family  
354 Peach St  
Fruitland MI  
(Terry, Bobbie & Douglas)



### Editor's Notes

First things first, I must apologize to Gordon Dobecki for the January Rockfinder article on faceting. My editing got a little carried away and I left out some of his important points. I'm hoping that we can arrange an update in an upcoming issue and correct my error.

It was certainly a privilege to work with Gordon at the Science Alive exhibit last week. For those how didn't make it down, there were about 35 exhibitors and a number of programs in the theater. This is an outstanding program and the library really does a great job organizing it all. You can certainly tell that the kids enjoy it too, when they patiently wait in line, we sometimes twenty to thirty people waiting, to get their turn polishing the Petoskey Stones.

On other new material we are now receiving some new publications:

Mineral Mite - micro specimens.  
American Gemcutter - faceting.  
Rocky Road News - general.  
The Midwest Faceter - faceting.  
Metalsimth - jewelry design.  
American Paleontologist.

Please let me know if you would like a copy for review.

See you at the February meeting.

*Larry Hess*

### A Safety Tip from the MWF Lapidary Arts Chairman, Bill Horton

DANGER MEXP - An eye specialist has given strong warnings about the grave danger of using the catalyst hardener which is mixed with some resins. The specific tox agent involved is methyl-ethyl-ketone-peroxide. A drop of this catalyst in the eye very progressively destroys the tissue and results in *blindness !!* Once started, there is no way of stopping the destruction or of repairing the damage. No known neutralizer has been discovered. Washing the eye with water will only be effective within four seconds after contamination.

Although MEXP is not present in all epoxy glues, it is present in extremely high concentrations in most modern fillers, glues and in the catalyst used in Fiberglass hardeners and liquid casting plastics.

- From Rockhound News 10/93, via The Tulip City Conglomerate.

### Russian Miners Find Huge Emerald

Miners in the Ural Mountains discovered a 5,805 carat emerald and named the hugh jewel "the President" after President Boris Yeltsin.

The Business daily Commersant said the color and purity of the two and one half pound stone could make it one of the most valuable emeralds ever found in the country. It will probably be sold as a museum piece, and was initially appraised at \$1.5 million.

- excerpts from San Jose Mercury News, via BRECCIA.



## Opening & Cleaning Geodes

The opening of geodes can be a pleasurable and surprising experience if the proper tools are used.

The pro uses a set of two hardened steel points fastened to a hand or powered press. He thus applies pressure from two sides. This works real well, but the outfit is rather expensive. Another ideal way is to score the geode all the way around rather deeply with your trim saw. You can do this by raising the splash guard and rotating the geode by hand until cut all around. It is then very simple to use a screwdriver to pry the sections apart. The third and most used method is to lay the geode in a soft (earth) depression. Look the geode over for any cracks or weak spots. These should be found and force applied there. When you have decided where you will apply pressure, use a medium weight hammer and center punch. (Never use chisels). Put the punch in a spot most likely to keep it from sliding off, and hit several blows; easy at first, then harder. Regardless of the method used, always use gloves and safety glasses. Keep your sections together with tape or rubber bands when transporting them home. Remember, do not hit geodes with your hammer. You may have on safety glasses, but what about the rockhound 10 feet away. Chips and burrs from your tools fly like bullets.

After the geodes are opened, extreme care should be taken when cleaning so as not to destroy the many micro crystals they often contain. These are very tiny and easy to overlook. Smythite, siderite, goethite, millerite and strontianite are a few hard-to-come-by crystals that are most times destroyed by the rockhound when cleaning his

specimen with brush and water. If the geode, when opened, has iron oxide stains, (brown coloring), these crystals in all probability have already been destroyed. On these it is safe to wash with a hose and brush. If the discoloration is still present after using soap, water and brush, soak in a solution of oxalic acid, 1/8 cup oxalic acid crystals per each gallon of water. (Oxalic acid may be purchased in any drug store). As much mud as possible should be removed before soaking in acid. Do this with a piece of wire, ice pick, etc. - care must be taken so as not to scratch the crystals. Caution: Do not allow acid to touch your skin! Use rubber gloves! Using a hose and brush occasionally will help speed the cleaning operation, even though it may take as much as six months to clean all stain from your specimens. When clean, wash in mild soap and rinse extra well.

These method will be very effective when geodes are quartz-lined, but oxalic acid will dull or even discolor most of the material while in acid, take it out, wash well and start over with a weaker solution.

- Originally by Lloyd N. Owen & from a past Rockfinder.

Happy

Valentines

Day



Did you know that clams live up to twenty years. Of course you did! But, did you know that their shells endure for hundreds of millions of years in the ocean and when slices by paleontologists, can reveal the temperature and content of ancient seas.

- via GEMS and Boulder Buster.

**ANOTHER PAIR OF EYES Part 3**

by Tom Warren

**"ACCUSTOM YOUR EYES TO THE DARK"**

In order to fully appreciate the fluorescent response, it is best to accustom your eyes to the dark. If possible, do your experimenting in a room with the shades down and the lights turned off. Since you will be using an ultraviolet source, either short or longwave, both of which are relatively weak compared to white light, you can obtain better contrast and effects by working in the dark.

The most common fluorescence is found in calcites. All fluorescent minerals including calcite fluoresce because of an impurity called an activator. An impurity may be only a few parts per million or it may be a small percentage of the mineral. For example, manganese is the main impurity that causes calcite to fluoresce red. Almost every known fluorescent color can be found in calcites which seem to attract the greatest variety of activators.

Several of the minerals pictured in this article are from Franklin, New Jersey. It has been designated the Fluorescent Mineral Capital of the World because the zinc mines there have produced more fluorescent minerals than any other one location in the world. In addition, these minerals are spectacular in their brightness and variety of colors.

The brilliant red of calcite and the yellow-green of willemite found in Franklin, New Jersey are probably the most beautiful of all fluorescent specimens. Although closed since 1957, the Franklin mines had produced willemite, a rich source of zinc, for over one hundred years. Willemite is an ore of zinc and it is often found in conjunction with calcite. The

fluorescent color of willemite is always green although varying through every shade of green. Manganese is the activator associated with the zinc. The red fluorescence of calcite is also due to the presence of manganese. The manganese varies from one percent to five percent. Less than one percent or more than five percent of manganese causes the calcite to be non-fluorescent.

Another interesting zinc mineral is sphalerite, a zinc sulphide. Under certain conditions, this mineral fluoresces vivid orange. Certain lithium minerals are fluorescent. Such an example is eucryptite which fluoresces a beautiful purplish-red.

Certain uranium ores are also fluorescent, especially autunite, schroekingcritc, metauranocircite and a few others. Uranium salts may also contaminate other minerals such as quartz, agate, opal and hyalite. The fluorescence, in this case, is usually a softer green.

Zirconium is another valuable metal used in industry. It has the ability to remain strong while hot. Zirconium is found in the mineral zircon that is also recognizable as a gemstone. Zircon fluoresces a deep orange-yellow. Although they are not concentrated enough to be of value, this zircon is commonly found as brilliant yellow fluorescent specks in the stream sands of the Rocky Mountains. Strangely though, gem zircon, the clear kind, is seldom fluorescent. Some scientists believe the fluorescence in zircon is probably due to a very rare element called hafnium.

The minerals listed above may or may not be radioactive, however the minerals that fluoresce with uranium salts are never



radioactive. They are always safe to handle and some may be very beautiful specimens. The amount of uranium in stones with uranium salts is only a few molecules per million. This amount of contamination is very widespread over the earth and probably causes more fluorescence in minerals than any other activation.

Earlier I mentioned there was a difference between longwave ultraviolet lamps and shortwave ultraviolet lamps. In order to make a lamp that has both longwave and shortwave, it is necessary to convert one half of the shortwave energy to longwave energy. This reduces the shortwave fluorescent energy by one half. When ninety percent of your minerals respond best to shortwave energy and you cut the available energy in half, you will find that you have lost much of the brilliance of your fluorescing minerals. Further, the range of the ultraviolet light is drastically cut down. More multiband ultraviolet lamps are sold than shortwave ultraviolet lamps, but I wonder if you are not really short-changing yourself with such a purchase.

How valuable is this longwave lamp that will fluoresce ten percent of the minerals you may find? I have used both kinds of lamps in the fields, and my preference is the shortwave ultraviolet lamp. With the shortwave lamp I can see farther and the fluorescent glow is brighter. During outdoor use there is rarely any need for stooping or bending over to see fluorescence.

In the mineral hobby one finds many branches of interest. There is the cutting, polishing and the making of jewelry which includes spheres and cabochons. Many hobbyists become collectors of

crystals and a variety of minerals. Some hobbyists specialize in certain forms of minerals, and some collect fossils. The variety of minerals one can collect is about as limitless as your imagination.

The collecting of fluorescent minerals is my greatest interest. I can collect hundreds of varieties and colors. I can cut and polish fluorescent cabochons, a smooth surface makes the fluorescence brighter. The fluorescence of polished spheres is more interesting than many uncut stones. If anyone has an artistic eye, they can paint with fluorescent minerals.

Now I have explained how this extra pair of eyes enables you to see things you have never seen before. You know what happens and why it happens, so the next time you go on a weekend trip or vacation, be sure to take an extra pair of eyes with you. You never know what you may be walking over. Hidden values may be under your feet.

This brings us to a very interesting aspect that you may have never thought of before. That is, this rock now becomes a source of light. You have to change your whole program of thinking when you look at the fluorescent minerals. All of your life you have seen everything around you by reflected light. Now you are looking at minerals that glow because they, themselves, are actually sources of light. They receive this invisible energy, change it, and send it back to us as color. So when you take an ultraviolet lamp on a nighttime exploring trip, you may find rocks that glow and each color you see will be characteristic of the minerals in that particular rock. The glowing colors are a means of identification. As you roam an area

outdoors, you will often see tiny particles of light shining in the darkness. These are light beacons drawing your attention to a mineral hidden among other non-fluorescent rocks.

It is noteworthy that most minerals are non-fluorescent. However when you do find one that is fluorescent it will glow. This glow may be bright or dull depending on the size of the rock, but usually it will stand out sharply because of what we call a high contrast ratio - a glowing color against a dark background.

The Chinese have a proverb which says that a picture is worth a thousand words. Those of us who have the fluorescent mineral hobby are provided not only one picture. We have the means to combine science and beauty. With an ultraviolet lamp we can amaze our friends with fluorescent colors in our minerals which they have to see before they believe.

End of Part 2, edited to three parts.

- From Lizzadro Museum Bulletin, 9/93. Reprinted with permissions of the author and the Lizzadro Museum.

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When using chrome oxide for polishing Jade, mix it with one half water and one half vinegar.

After a tube of epoxy has been opened, dab a bit of vaseline on the threads. The cap will not stick and mess up your tub. Also, vaseline around the rim of your tumbler before bolting on the lid results in a tighter seal and easier to remove.

- via GEMS and Shawmish Roktawk.

**What We Do.** by Ruth Bailey, Executive Vice President

The American Federation sponsors a number of programs designed to help our societies and members. These promote both our enjoyment and safety in our field trips and activities.

One of our very important interests is education as shown by our continued support of the American Scholarship Foundation. We are now able to give substantial scholarships to a number of students each year.

Also, we have several programs which offer opportunities for our members to learn more about earth sciences and help others. An important one is our All American Federation Club award which recognizes and honors societies for service to their members, their community, visitors, regional federations and public agencies. This award is a great way for a society to take stock of its efforts and promote its place in the community.

We also have a Program Competition Committee which assist members who wish to produce a program relating to the study of the earth sciences. These programs are then sent to each of the regional federations so that they may be distributed and used for local club programs.

There are a number of other programs which are valuable and help promote the growth and enjoyment of our rockhound hobby. And the officers and chairmen of the American Federation are always anxious to find ways to do more. So, if you have a questions or suggestions please feel free to contact an officer or the chairman of the committee which interests you. - The AFMS Newsletter 9/93.

Book Review - *Professional Goldsmithing- A Contemporary Guide to Traditional Jewelry Techniques* by Alan Revere. Van Nostrand Reinhold, 1991, 9 by 12 inches, 220+ pages.

This book is divided into two parts with hundreds of beautiful color pictures. The first part, about one fourth of the volume, contains a number of short chapters on the metal working process. Included are properties of precious metals, procedures, tools, techniques, and a short section on working with platinum.

Part two of the text is thirty short chapters, each a complete jewelry project. Every project gives detailed instructions, diagrams and photographs of the techniques involved. The results are bracelets, chains, rings, pendants and others, in silver and gold.

The price of \$62.50, is a bit high, but if you're in search of challenging projects or new design skills, this could be a valuable book for you. - LH

**1994 Show Update**

On Monday Jan 24, 1994 I made phone contact with Russell Feather of the Smithsonian Institute and confirmed that fourteen pieces from the American Gemstone Jewelry Collection will be at our 1994 Convention / Show.

A follow up letter was sent the same day to confirm our phone conversation.

- Chuck Collins, Dealer Chairman

Remember, if you would like to participate in the joint display of geode halves at the MWF show, bring your geode half (labeled with your name) to one of our meetings and present it to me. I will gather and arrange the display and return all materials to you afterward. Thanks.

- Tom Noe

Book Review - *Fossils* by Cyril Walker & David Ward. Dorling Kindersley, NY, 1992, 230pp.

Book Review - *A Guide to Fossils* by D. Dineley & G. Windsor. Princeton Univ Press, NJ, 1992, 230pp.

These are two similar publications, which have recently come to the American market and both are directed toward the same audience. Both purport to tell the interested reader how to identify any fossil they may find, base upon a selection of 500 specimens covering the entire spectrum of fossiliferous remains from Formaminiferida to Vertebrata, as well as trace fossils and plants.

-by Emily H. Vokes,  
American Paleontologist 3/93

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*Everybody is coming to the 1994 South Bend Gem & Jewelry Show & Sale*



**Open to the Public**

**Friday April 15 - 2pm to 7pm**  
**Saturday April 16 - 10 to 6pm**  
**Sunday April 17 - 10 am to 4pm**

**Century Center**  
**120 S. St Joseph St**  
**South Bend, Indiana**

*Jewelry - Gemstones - Crystals - Fossils*  
*Repairs - Stone Setting - Beads - Books*  
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Information: Margaret Heinek 7091 E. East Park Lane New Carlisle, IN 46552-9400 Phone 219-654-3673	Dealer Chairman: Bill Crull 17651 Bryan Street South Bend, IN 46635 Phone 219-272-7209
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### Official State Minerals

February is here, **kids** and the first to solve (or the best score) and turn in this puzzle to the Editor, will receive a special prize at an upcoming meeting. The Editor (and references) will be the final judge of all entries. Just indicate each state's mineral(s) by putting the number(s) in the blank beside each state. Note that some States have more than one mineral.

1	Almandine Garnet	Alabama	_____	
2	Amethyst	Alaska	_____	
3	Aquamarine	Arizona	_____	
4	Barite Rose	Arkansas	_____	
5	Bavenite	California	_____	
6	Benitoite	Colorado	_____	
7	Blue Chalcedony	Connecticut	_____	
8	Blue Topaz	Delaware	_____	
9	Chlorastrolite	Florida	_____	
10	Diamond	Georgia	_____	
11	Emerald	Idaho	_____	
12	Fairburn Agate	Illinois	_____	
13	Flint	Indiana	24 _____	(Hint)
14	Fluorite	Iowa	_____	
15	Fresh Water Pearl	Louisiana	_____	
16	Galena	Maine	_____	
17	Garnet	Massachusetts	_____	
18	Gem Staurolite	Michigan	_____	
19	Geode	Minnesota	_____	
20	Gold	Mississippi	_____	
21	Hemaite	Missouri	_____	
22	Jade	Montana	_____	
23	Lake Superior Agate	Nebraska	_____	
24	Limestone	Nevada	_____	
25	Moss Agate	New Hampshire	_____	
26	Mozarkite	New Mexico	_____	
27	Nephrite Jade	New York	_____	
28	Petoskey Stone	North Carolina	_____	
29	Petrified Wood	North Dakota	_____	
30	Petrified Red Wood	Ohio	_____	
31	Petrified Coral	Oklahoma	_____	
32	Petrified Palm Wood	Oregon	_____	
33	Prairie Agate	Rhode Island	_____	
34	Red Garnet	South Carolina	_____	
35	Rhodonite	South Dakota	_____	
36	Rose Quartz	Tennessee	_____	
37	Sapphire	Texas	_____	
38	Serpentine	Utah	_____	
39	Sillemanite	Washington	_____	
40	Silver	Wisconsin	_____	
41	Smokey Quartz	Wyoming	_____	
42	Star Garnet			
43	Thunder Egg			
44	Topaz			
45	Toredo Wood			
46	Tourmaline			
47	Trilobite			
48	Turquoise			
49	Turquoise			