THE ROCKFINDER

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

Happy Holiday and New Year

MICHIANA GEM & MINERAL SOCIETY, INC.
AFMS
SCRIBE
MID WEST FEDERATION

THE ROCKFINDER

DECEMBER, 1998

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.

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___ 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

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 38, Number 10 December, 1998

Meeting: Sunday, January 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

IF YOU HAVE NOT YET PAID YOUR DUES, PLEASE SEND THEM TO DIANE GRAM, 2921 EASTMONT, SOUTH BEND, IN 46628 TO REACH HER BY DECEMBER 31.

January Birthdays
10 Darlyn Maust
13 Lorraine Jordan
16 Jan Horrall
19 Dennis Horrall
20 Leo Heynssens
22 Yvonne Church

Anniversaries
5 David & Sally Peltz
9 Larry & Cindy Hess
14 Don & Yvonne Church
28 Dick & Joan Rosback

merry Christmasaurus

MARGARET'S COLUMN

Where has this year gone? I sincerely hope everyone will be well and have a wonderful 1999. We had an especially good time at the annual Christmas party on December 6, and sorely missed those who were unable to attend. There were about 40 there. The food, as usual was delicious; the decorations were really nice. Thanks to Bob and Kathy Miller, and everyone who helped with the tables and hall. Thank you very much.

We have several ideas being planned for next year, and we hope you will attend the meetings, to help with projects and learn from the programs. (I heard a member telling Tom Noe that he had a good program he would be glad to give, and it sounded really interesting.) One working session we will have early in the year will be making grab bags for the show's Kiddies' Korner. (So start saving small rocks, minerals and the plastic "holders" that are found on six-packs of soft drinks.) And we must make a decision on what we can do for South Bend's Science Alive program to be held on February 5 and 6.

If you have ideas for upcoming programs, please let Vice-President Ed Miller know, so he can make arrangements.

We are hoping to have a weekend bus trip in the fall of 1999, so keep this in mind, and we will let you know when and where. Kathy Miller is in charge of making the arrangements.

Bob and I would like to wish EVERYONE A MERRY HOLIDAY SEASON AND A HAPPY, HEALTHY NEW YEAR.

Margaret

ALAA UPDATE

The Bureau of Land Management is now proposing a limit on collecting invertebrate fossils without a permit. On public lands administered by the BLM, the limit would be 25 pounds removed per day per person. The matrix would be included in the pound limit. This proposed rule would be similar to an existing rule covering the collection of petrified wood (25 pounds plus one extra piece).

The BLM is asking for public comments on the new regulation, and invites suggestions on ways they can limit the collecting of fossils. You can send any comments you may have to:

Bureau of Land Management Administrative Record
Room 401, LS
1849 C. Street NW
Washington, DC 20240

Note that this rule covers not vertebrate fossils but invertebrate, of which there are vast numbers. Also, note that the pound limit will encourage collectors to break up specimens in the field, thus increasing the likelihood of damage to a fossil. (It doesn't take long to gather up 25 pounds of rock.) In the past, there has been no limit on invertebrate collecting.

Your attention is also drawn to the fact that in 1999 ALAA will probably be introducing into Congress the Rock and Mineral Collecting Act and the Fossil Preservation Act. This will define collecting rights on public lands before they are regulated out of existence.

REGIONAL SHOW SCHEDULE

EASTERN FEDERATION
August 6-8
New Carrolton, Maryland

CALIFORNIA FEDERATION
June 18-20
Turlock, California

SOUTH CENTRAL FEDERATION
August 21-22
Bossier, Louisiana

NORTHWEST FEDERATION
June 18-20
Hillsboro, Oregon

SOUTHEAST FEDERATION /AFMS COMBINED
July 9-11
Nashville, Tennessee

ROCKY MOUNTAIN FEDERATION
November 19-21
Tuscon, Arizona

MIDWEST FEDERATION
April 10-11
Columbus, Ohio

MINUTES

The November meeting of the Michiana Gem and Mineral Society was called to order by Margaret Heinek, president, at 2:10 P.M.

Present were 19 adult members, 2 junior members and one guest, Eric Hinkler.

Refreshments were arranged on a table decorated with a cloth imprinted with bright pumpkins and ears of corn.

Reports: Minutes: Sr. Jeanne moved that the minutes be accepted as printed in the *Rockfinder*. Tom Noe seconded the motion. All voted "yes."

Treasurer's report: Diane Gram gave the total only and filed the report.

Librarian report: Diane Gram noted that a listing of all our books will be placed in our 1999 roster.

Sunshine: Cards were sent to Bess Wise, Alec Rubenstein and the granddaughter of Marcelle Nagy.

Old business: The bus trip to the Field Museum was very well organized by Kathy Miller. All who went enjoyed it. Kathy will plan another outing for the fall. One question arose. Should the hat be passed for the bus driver? Discussion was tabled until later.

The Christmas party will be December 6, at 1:00 P. M. All voted on chicken to be furnished by the club. Each is to bring a dish to pass and a gift to share at approximately $3.00. The gift should be marked for "man," "woman," or "child."

New business: We have an invitation to set up an exhibit at Science Alive again next year on February 6. We were asked to show a "new look." We will discuss our participation at our January 24 meeting. Tom Noe suggested we make an obvious set-up to enourage sign-ups, in order to get more names for the mailing list.

Tom Noe reported on his efforts to clarify information on a court case in California involving the Bureau of Land Management and public collecting rights. He hopes to receive a copy of an article which will tell exactly what's happening.

Sr. Jeanne, vice-president, presented the proposed slate for the next year's officers as follows:

President: Margaret Heinek
Vice-President: Ed Miller
Treasurer: Bob Heinek
Secretary: Gladys Pacholke
Liaison: Mike Slattery

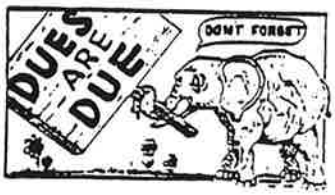
Herb Luckert moved to accept the slate. David Peltz seconded the motion. A unanimous vote was taken by a show of hands. Applause thanked the old slate and welcomed the new slate.

Betty Stout has donated several navy blue club vests to our group. Betty also gave a box of mineral specimens for shows.

Exhibits: David Peltz displayed purple pyrite, white Petoskey stones and Vermont garnet. Diane Gram showed colored glass slag. Bob Heinek brought in opalized wood and fossil coral. Also on display were many "thank you" notes and drawings from the St. Joseph School students for the program given them by Bob and Margaret. We are invited back again next year.

Door prizes went to Diane Gram, Bill Nelson, Tim Maust and Eric Hinkle. After refreshments were served by Mike Slattery and Addie Niebauer, a video program on meteorites was presented by Sr. Jeanne.

Gladys Pacholke
Secretary



CUBIC GARNETS

From an article by Jack Nelson published on the internet.

Jack Nelson has been finding occasional cubic garnet crystals since 1992 in small streams around the Potomac River in Maryland and Virginia. This is apparently the first time such crystals have been described in the U.S. They are probably not rare, but they are small--less than 1 mm. Garnet crystals are usually trapezohedral or dodecahedral, not cubic. Anyone else finding cubic garnet is encouraged to contact Jack at 17300 Hughes Rd., Poolesville, MD 20837.

HERE WE COME A-FOSSILING
by Donna Cole

'Twas time for a field trip and all through the houses
All the members were packing and calming their spouses;
The backpacks were packed up and loaded with care
In hopes that the fossils would really be there.

Those rockhounds were nestled all snug in their beds
While visions of trilobites danced in their heads.
They'd polished their hard hats and packed their sunscreen,
And tried to foresee all the things unforeseen.

When out of a sound sleep I woke with a start,
Wondering if it's the time to depart.
Away to the window I flew like a flash,
Grabbing my chisel and hammer to smash.

The moon still was shining, can this be for real?
A carload of fossilers, all filled with zeal!
Their eyes how they focused, their smiles full of zest,
Their cheeks were all flushed as they pictured their quest.

You'd best get a move on, came the command,
They're out there, they're waiting to jump in your hand!
Then in a twinkling I joined this odd grouping,
With their digging, and sawing, and scraping, and stooping.

Away to the quarry we drove with intent,
We paused at the edge, then began our descent.
As I climbed over boulders, scraping my shin,
I pictured the treasure troves hiding within:

The gastropods, cephalopods, trilobites, snails,
The crinoids and blastoids, and tiny feet trails.
From the top of the quarry to the lowest of washes,
Wearing my sunscreen and sometimes galoshes,

We brave all the hurdles from bee stings to rain,
And comments from friends that we're all quite insane.
Be that as it may, when the time rolls around,
All of us die-hards will likely be found

In places like road cuts, and creek beds, and quarries,
Digging up fossils, and sharing our stories.
Soon we will head home all dusty and tired,
We'll think of the specimens we just have acquired.

We'll store them in basements, and boxes, and cases,
Ignoring the shocked looks on family faces.
For a couple of weeks we'll be tranquil and docile,
Then our eyes will glaze over when we hear the word fossil.

Then they'll hear us exclaim as we drive out of sight,
Happy hunting to all; we'll be back Sunday night!

Fossilphile (May, 1997)

PAPER COAL: CURIOUS RELIC OF THE COAL AGE

Paper coal is known from only two areas in the entire world — the Moscow basin of central Russia and Parke County, Indiana. The Hoosier deposit was discovered by an Indiana Geological Survey geologist in 1958 in the highwall of a strip coal mine near Rockville. Natural outcrops of paper coal later were found along streams in northern Park County.

Leafy in texture, paper coal resembles a stack of scorched paper and is composed of the waxy coatings of ancient leaves and twigs. Indiana paper coal consists mostly of fragments of seed ferns that bridged the gap between primitive plants and today's seed bearing plants. They have been extinct for more than 200 million years.

Preservation of the fragile cuticles indicates that they were deposited in quiet lagoons. In paper coal, the original plant material has been oxidized and the more resistant cuticles have been left behind.

(From *Indiana Geological Survey, Dept. Of Natural Resources* via OSAGE HILLS GEMS 5/98)

HOW TO MAKE A SIMPLE CAB STAND

As you build your collection of cabochons, you may decide that you do not wish to set all of them in jewelry, but a good part of the fun is showing them to others. Perhaps you will want to put in a display at a gem and mineral show. For this purpose, you need some device to hold the stones in place and exhibit them to their best advantage.

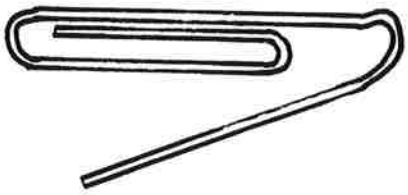
There are a great many things used by gem cutters to hold their cabochons in the upright position. These range from tabs of drink cans to sophisticated plastic stands.

The stand shown in the illustration is somewhat unique in that it costs less than a penny, is available at any variety or stationery store, can even be fashioned by a pebble pup in less than a minute. The object from which it is made is the common paper clip.

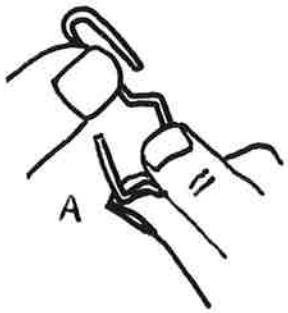
Paper clips come in various sizes. The standard found in most office or home desks is 1 1/4 inches long. These are ideal for holding medium-size cabochons (22x30 or 30x40). There are shorter and longer clips readily available that will hold almost any size cab you care to make. Regardless of size, the stand is made in the same way.

1. Take a paper clip and bend the end with the large loop upward so that it is at a slight angle.

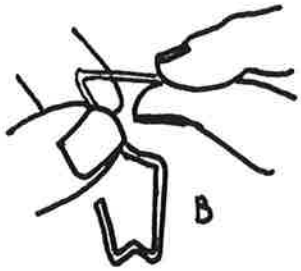
2. Spread the outside arm as shown.



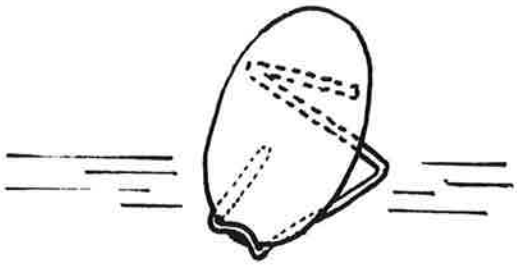
3. Bend the inner loop upward, then bend side "A" to the left.



4. Bend wire "B" forward and into a position that is horizontal to the base surface on which the stand rests.



5. Adjust the various segments so that the rack sits level and place the cabochon as shown. Wire "B" should rest flat against the back of the stone.



Follow the steps shown in the illustrations and you will wind up with an almost instant cab stand. When properly bent, the bottom of the stand lies flat and the cross arm against which the cabochon leans fits flush against the back of the stone in a horizontal position.

The Rocket, Vancouver, B.C. (June, 1993)

Places To Go . . .

Just two hours from here, at the Cleveland Natural History Museum, is a new gallery of gems ... which according to some, rivals the gem collection at the Smithsonian! The curator of the museum rightly claims it to be among the top five collections in the country.

The museum has been renovated to accomodate this collection donated to the Natural History Museum by Jeptha Homer Wade II, founder of Western Union. who died in 1926.

The collection is not new to the museum — the 2,400 gems and stones have been acquired over the museum's 78-year history. And parts of the collection have been on temporary display over the years; the Gem Fire in 1990 and Facets of Fire of 1983 were popular temporary exhibits.

The new gallery is officially known as the Wade Gallery of Gems and Jewels.

Among the 1,500 gems displayed:

— A collection of several dozen colored diamonds - from green to pink to orange and brown, including one that, while much smaller, is a deeper blue than the Hope diamond. A more intense color usually indicates a rarer gem, according to Curator Paul Clifford Jr.

— The museum also has an extemely rare two-colored diamond, green and clear!

— A jade phoenix brooch that is believed to have belonged to the dowager empress of China.

— Colored freshwater pearls from the Mississippi River, now priceless because pollution in the river has made the mussel that produced them extinct.

— More than 100 opals, considered one of the finest collections in the country.

The Cleveland Natural History Museum has always been known as a dinosaur museum ... and will probably always be thought of as the dinosaur museum. But these diamonds and gems are sure to add glamour and glitter to those old bones!

The Wade Gallery of Gems and Jewels is located in the Cleveland Natural History Musem at 1 Wade Oval Drive in University Circle on the East side of Cleveland. Hours are Monday through Saturday, 10 a.m. to 5 p.m. From September through May, the museum stays open until 10 p.m. on Wednesdays. Admission is $6.50 for adults; $4.50 for children ages 5 to 17 and senior citizens; free for children 4 and under and museum members. Call the museum at 216-231-4600, or 1-800-317-9155.

The museum's Gift Store also provides many exquisite pieces of fine jewelry.

Bones are the museum's first love ... but these gems do add glitter and are indeed worth seeing!

The Rocky Reader - Toledo, OH

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.

ERIC, THE OPALIZED PLESIOSAUR

Nicknamed "Eric," the early Cretaceous fossil plesiosaur was discovered in mid-1987 by an opal miner at Coober Pedy, South Australia. In 1988, the remains were brought to Sydney by an opal dealer who enlisted the assistance of the paleontological staff of the Australian Museum to clean and reconstruct the shattered skeleton.

It took 450 hours of painstaking work to remove the rock from the numerous bone fragments and to reassemble them. All the original bone in the plesiosaur's skeleton had been completely replaced with opal, most of a poor-quality white variety; a type of preservation unique in Australia.

The results were spectacular. Most of the skeleton (85%-90%) was recovered and successfully rebuilt. The fragile skull came out in four separate blocks of rock. Inside the plesiosaur's rib cage lay piles of smooth, round pebbles or gastroliths (stomach stones). Mixed in with them were a dozen tiny fish vertebrae, also opalized, which were the remains of the animal's last supper.

Preliminary studies reveal this plesiosaur, a fast-swimming marine predator with numerous sharp teeth, to be related to a form known as *Peyerous*, found in South Africa in rock approximately 60 million years old. However, the Australian animal probably represents a new species.

Adapted from *The Fossils Collector* (May, 1993)

FANTASTIC FOSSIL FOR SCIENCE?

by Gregory Brown
gbrown@unlinfo.unl.edu -
University of Nebraska State Museum–Division of Vertebrate Paleontology

That new fossil that you just found looks to be an important, fantastic new fossil that will advance the art of paleontology. So you hustle it to the experts. Their enthusiasm is mild. On the other hand, upon spying a small bone fragment you thought little of, their eyes bulge like saucers. What's going on?

To many amateurs and hobbyists, importance is judged on only two criteria: 1) Is it new to science? 2) Is it unusually complete or well preserved? These are "9-pin, dot matrix" questions! Paleontology is now looking at 1200+ dpi resolution questions!

The science of paleontology--determining past environments, climates, faunal composition, behavior, etc. etc.--depends on far more detailed information now. The basic questions (what kinds of animals were here; what did they look like?) have generally been answered. We're now addressing far more complex questions. Thus the importance of collecting *information*. You can find an electronic version of a detailed article I wrote on this subject (specifically for amateur paleontologists) on our museum's web page at: http://www.museum.unl.-edu/research/vertpaleo/musnote2.html. "Preserving Vertebrate Fossils: Notes from the Laboratory" can be printed or downloaded from the site.

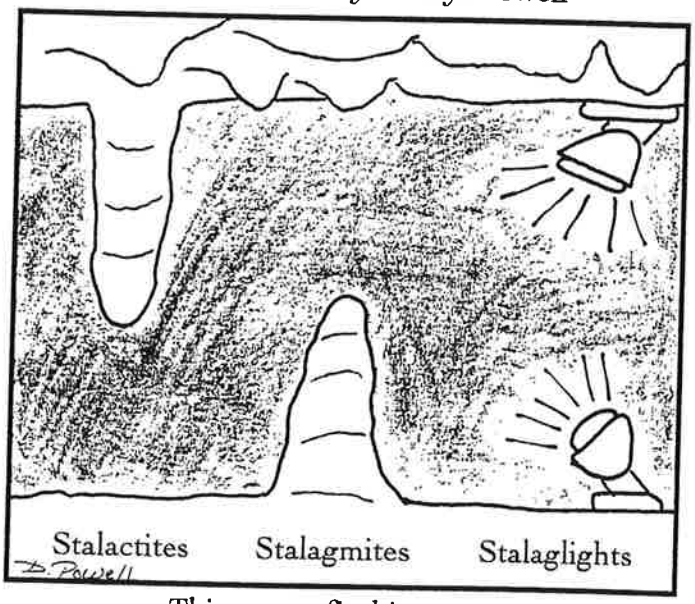
Though specific about vertebrates, the general principles apply to all fossils. What's really important? For anyone (amateur or professional) to determine a species-level identification of a critter (with any degree of confidence) is nearly impossible unless they specialize in that group. Genus- or family-level IDs are much more realistic. Geologic provenance is likewise difficult to establish precisely without a great deal of expertise.

For instance, my field notes from (many!) years ago record strat data like this: "Aquia Formation, zone 2." Was it? According to my then-current knowledge–and some very very old literature–it was. Now, I doubt it very much. What is really important is to record common-sense observations that would allow you (or someone else) to return to the location and relocate the very spot the fossil came from. For detailed research on museum collections, professionals will always try to return to the original locality and look at the sedimentology and stratigraphy themselves, even if the original data was collected by a well-respected colleague.

The name of the critter and the name of the formation are far less important to record in your field notes than some good old-fashioned basic observations about the fossil's occurrence. Without data, a beautiful fossil may be scientifically worthless. With data, a seeming scrap may be a scientific treasure. If something is worth picking up, it is always worth documenting.

AFMS Newsletter (Dec./Jan., 1997/8)

Crystal Faces by Darryl Powell



Things you find in a cave.

Gemological Guidelines for Gemstone Durability in Jewelry

GEM MATERIAL	Mohs Hardness	Toughness	Ultrasonic / Steamer / Ionic Cleaning	CLEANING Comments for Ultrasonic and Steamers
BERYL Aquamarine & others	7 1/2-8	Good		Use extra care if liquid inclusions or feathers present.
EMERALD	7 1/2-8	Poor to Good		Avoid heat: may cause fracture or breakage. Polishing compound may get into surface-breaking fractures.
CORAL	3-4	Fair to Good		Avoid heat.
CORUNDUM Tp Ruby & sapphire	9	Excellent except in highly twinned or fractured stones		Avoid extreme heat: may alter color. Polishing compound may enter inclusions/fractures breaking the surface. Oiled or dyed stones: avoid solvents.
STAR RUBY & SAPPHIRE	9			
DIAMOND	10	Good to exceptional		Use cautions if stone contains feathers or is included.
DIAMOND, COLORED	10	Good to exceptional		
GARNET	7-7 1/2 Damantoild: 6 1/2-7	Fair to good		Ultrasonic: risky if liquid inclusions present. Avoid thermal shock.
IOLITE	7-7 1/2	Fair		Normal cautions.
IVORY	2 1/2-2 3/4	Fair		Avoid solvents. Clean with cloth dampened in methylated spirits.
JADE Jadeite	6 1/2-7	Exceptional		Treated: avoid strong solvents.
LAPIS LAZULI	5-6	Fair		Dyed: avoid acetone and other solvents.
OPAL	5-6 1/2	Poor to fair		Heat turns stone white or brown and destroys play of color. Thermal shock casuses cracking, crazing, fracture.
PEARL	2 1/2-4	Usually good but variable		Avoid heat: causes cracking, may cause pearl to turn brown, burn or split. Attacked by all acids.
PERIDOT	6 1/2-7	Fair to good		Normal cautions.
QUART Amethyst & Citrine	7	Good		Avoid thermal shock.
TOPAZ	8	Poor		Avoid thermal shock.
TOURMALINE	7-7 1/2	Fair		Avoid thermal shock.
TURQUOISE	5-6	Poor to good		Avoid heat and chemicals. Ultrasonic solution may discolor.

SAFE FOR ALL STONES

Safe
Use caution
Avoid

CLEANING

The reaction of a stone to either cleaning procedure will also vary depending on the inclusions in the stone, the solution used in the ultrasonic, and the amount of time the stone remains in the ultrasonic, as well as on the procedure used in steaming. All stones are at risk of thermal shock if taken from the steamer and placed directly in the ultrasonic or water before they have sufficiently cooled.
Caution is advised regarding solvents and other chemicals, including ammonia, which is a common constituent of most household cleaners. Boiling is not recommended for any stone except diamond, and only for diamond when absolutely necessary and proper procedures are followed.

Edited from Gems & Gemology
Summer Issue 1987
GIA Publication