

# THE ROCKFINDER

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



# THE ROCKFINDER

OCTOBER, 2003

# 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), 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.



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 Yearly Membership Dues (Payable by December 15)  
 \_\_\_\_\_ Individual \$15.00 per year  
 \_\_\_\_\_ Family \$20.00 per year  
 \_\_\_\_\_ Junior \$1.00 per year  
 \_\_\_\_\_ Subscriber \$7.50 per year

Please indicate areas of special interest. (To be published in *The Rockfinder*).

General Geology \_\_\_\_\_ Beads \_\_\_\_\_  
 Gems & Minerals \_\_\_\_\_ Fossils \_\_\_\_\_  
 Cabochons \_\_\_\_\_ Field Trips \_\_\_\_\_  
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Name(s) \_\_\_\_\_

Street \_\_\_\_\_

City, ST., Zip \_\_\_\_\_

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

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

## HEADS OF COMMITTEES

Programs Don Church 269-651-7616  
 Hospitality Pat McLaughlin 574-259-1501  
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 Librarian Sam Shapiro 574-234-9648  
 Historian Ed Miller 574-498-6513  
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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, (ph. 574-289-2028). Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617 (ph. 574-282-1354). Reporters, Bob Heinek, Herb Luckert, club members.

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**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.

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Signed \_\_\_\_\_ Date \_\_\_\_\_

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Birthday \_\_\_\_\_

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e-mail (opt.) \_\_\_\_\_

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# THE ROCKFINDER

Newsletter of the Michiana Gem & Mineral Society

Volume 43, Number 8

October, 2003

**Meeting:** Sunday, October 20, 2003  
Doors open at 1:30 p.m.  
Meeting starts at 2:00 p.m.

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

**Program:** Margaret Heinek will teach us how to make Wedgwood-style cameos. Everyone bring two small paint brushes for fine detailing. We will also have a display of fossils from our next field trip location, Crawfordsville, IN.

**Refreshments:** Tom and Pat McLaughlin



**Dues Should Be Paid  
Before December 15.**

**NEW AND IMPORTANT:**

We are updating our records. Please:

***EVERYONE USE  
THE GREEN FORM***

on the inside cover of *The Rockfinder*.  
**ALL MEMBERS** should sign it & send it  
in with your dues, even if you have  
been a member for a gazillion years.  
**ALSO NOTE:** the "Interests" you  
check will be printed along with your  
name and address in the next  
members' directory.  
Bob will accept dues at the October  
meeting; otherwise, it is best to mail your  
check to him (before December 15).

## **UP AND COMING**

Oct. 17-19: Three Rivers Gem and Mineral Society annual show, Fairgrounds, Ft. Wayne, IN.

Oct. 17-19: Eastern Federation convention and show, Poughkeepsie, NY.

Oct. 25-26: Evansville Lapidary Society show, Washington Square Mall, Evansville, IN.

Oct. 24-26: Central Michigan Gem & Mineral Show, Ingham County Fairgrounds, Mason, MI.

Oct. 25-26: Evansville Lapidary Society show, Washington Square Mall, Evansville, IN.

Nov. 7-9: Midwest Factors Guild show, Taylor Sportsplex, Taylor, MI.

## DIANE'S COLUMN



Fall weather is here, and I am enjoying our Indian summer. Our taste of cool weather has really made me appreciate the mild temperatures and beautiful colors of fall.

We had a wonderful turnout at our September meeting. Your participation is vital to an enjoyable and active club. The past few months have been very rock-related for me. August was the Midwest Federation meeting that was a new experience for me. The end of August was our local show. The show was very successful, due to the immense planning of the Heineks and participation of the club members. Then we had the field trip in September, great weather and fun. It was a good opportunity to collect and get to know fellow club members.

I am now starting to think of getting my saw and polisher out. I have the inclination to get some of my geodes cut. This will be my winter project, probably all winter. My equipment has not been used for a good long while so I am sure that it will need an overhaul. I may have lots of questions for all you experts. Now that I am content with polishing stones, another new experience.

Looking forward to seeing you all at the meeting.

## MINUTES OF THE SEPTEMBER MEETING

President Diane Gram opened the meeting at 2:05 p.m. Twenty-six members were present, plus five junior members and four guests. Minutes were approved as printed in *The Rockfinder*, with the correction that the Luckerts were not present at the Labor Day show. Bob Heinek read the treasurer's report, which was approved and will be filed for audit.

## OLD BUSINESS:

1. Diane gave a brief report on activities at the Midwest Federation Convention, which she attended as our club's delegate.

2. Sue Brown gave a report on the May picnic, which everyone agreed was a huge success and lot of fun. Thank you, Sue!
3. Margaret Heinek gave a report on the club's annual Labor Day show at Century Center, which was a great financial success, thanks to members who gave generously of their time, talents and effort.
4. Kathy Miller reported on the recent field trip to Brown County. Forty members participated. A letter from the wife of the bus driver was read to the club. Sam Shapiro wrote an article about the trip, which he sent to the *South Bend Tribune*.
5. Letters to congressional representatives regarding fossil collection legislation (HR2416) were circulated. Since this legislation affects fossil-collecting on public lands, members were encouraged to make their views known.

## NEW BUSINESS:

1. Diane asked for volunteers to form a nominating committee for our upcoming elections. Pat McLaughlin, Marty Perry and Sam Shapiro responded.
2. Margaret Heinek volunteered to be in charge of planning for the Christmas party.
3. Dues need to be in before December: \$15 for an individual; \$20 for a family, \$1.00 for a junior, submitted on the form printed in the newsletter. Either bring the dues to the next meeting or mail them to Bob Heinek (see the inside cover of *The Rockfinder*.)
4. Bob Miller spoke about rocks belonging to the club that will need to be moved and stored.
5. Phyllis Smallwood will do some research on options for better storage facilities.
6. The Saint Joseph County Public Library has asked for rock and mineral displays from the club.
7. Kathy Miller made a motion proposing a field trip to Crawfordsville, IN, for the first weekend in October, 2004. The motion passed.

The October program will feature cameo-making. Members are asked to bring two small detail brushes for the project. Two new members were introduced before the meeting adjourned at 3:30 p.m.

M. Jeanne Finske, Secreta



## CLUB-SUBSIDIZED BUS FIELD TRIP

October 1-3, 2004

We will be going by Cardinal Coach to Crawfordsville, Indiana, for the famous Mississippian fossils found in Montgomery County.

The club is fortunate to have Chris & Dick Samuels as our Co-Field Chairs next year. Chris & Dick have been going to Crawfordsville for a number of years to collect those sought after crinoids, invertebrates and other Indiana fossils, not to mention geodes. They know the Sugar Creek area and other collecting sites for us to go to. Be sure to attend the October meeting and see some of the "cream of the crop" collection they will have on display.

We will have accommodations for 20 no-smoke rooms, at the Day's Inn in Crawfordsville for the 2-nights stay. Plans are still in the forming stage for a possible trip to the Wabash College geology museum and the Saturday night get-together meal for the group.

**This field trip is very exciting as these fossils are sought after from amateur collectors and professionals alike.**

If you are intending to sign up at the October 26<sup>th</sup> meeting, it must be a **sure** commitment on your part. If for any reason you have to cancel a month before the trip, and we have no one on a wait list, you will be responsible for your motel room payment. These rooms are given to us at block room rate and every room has to be filled for that rate, even one room less makes the rest of the group lose the lower rate and they would be charged more. The bus is costing the club a large fee and we want to see it filled (47 seats). Be fair to others, if you commit, follow through.

A full itinerary will be made up; look for it in the "Rockfinder." We're looking forward to a great trip with good collecting.

Kathy & Bob, Chris & Dick  
Field Trip Co-Chairmen

## FIELD TRIP BUS SURVEY RESULTS

17 Responses

Taken from the September 28<sup>th</sup> club meeting.

How many bus field trips have you been on?

1-0, 2-1, 3-2, 1-4, 3-5, 1-8, 1-10,

2-almost all, 1-dozens, 2-everyone since we've joined.

Did you go on this years?

5-No, 12-Yes

What do you like best about the bus field trips?

1-haven't been on one, 1-being with family, 8-good times, friends, companionship, getting to know others, know members better, people, fellowship, friendships made, 14-collecting, 3-bus ride, not having to drive, the comfort, variety of things done, 2-enjoying the ride, 1-scenery

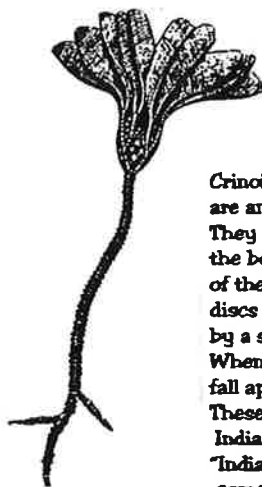
What did you like least?

11-no least things, 1-going home, 2-too rushed, trying to do too much in addition to collecting, 1-sight seeing on way back, 1-the long ride

Do you have suggestions on improvements for the enjoyment of the whole group attending the bus trips?

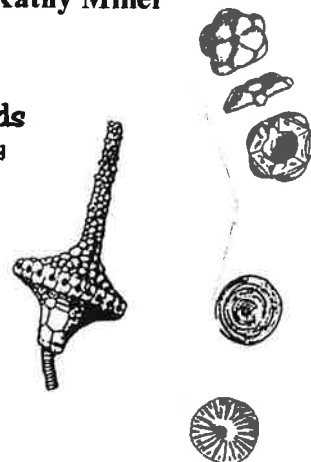
11-no, 1-pre-educational meeting (what to expect to collect), 1-people get back to bus on time!, 1-more toilet paper!, 3-The last two were great, fun by me and all, Couldn't be better, did a fabulous job on the trip, appreciate it so much.

Many thanks to all who completed the survey. Bob & Kathy Miller



### Crinoids

Crinoids are called "sea lilies," but they are animals rather than plants. They look like plants because the body skeleton is on the end of the stem made of button-like discs and held on the sea floor by a stone or root-like arms. When the animal dies, the discs fall apart and sink to the sea floor. These discs are common through Indiana and popularity area called "Indian beads." The oldest crinoids come from Ordovician rocks.



## IMPORTANT NOTICE TO MEMBERS:

Please consider the news item below, from *The American Federation of Mineralogical Societies Newsletter* (Sept., 2003). Club President Diane Gram asks that we all express our views on this proposed legislation as soon as possible.

## LOUD & CLEAR

George Loud, AFMS Conservation & Legislation Chair

Re: H.R. 2416 - Paleontological Resources Preservation Act. August 1, 2003.

We all need to do some fast letter writing! Let me remind my mineral collecting friends who do not seem to be disposed to concerning themselves with rights to collect fossils, that **the relevant agency rules lump minerals, rocks and invertebrate fossils together in their regulations!**

The Senate companion bill to H.R. 2416 has already passed the Senate (S546). Here's what Washington Watch had to say about S546: "Bad Bills S546 - Anti-rockhounding bill titled the 'Paleontological Resources Preservation Act', places severe penalties on recreational rockhounding, would permit only 'experts' to disturb public land surfaces. It allows for seizure of private vehicles, camping equipment, and anything else the government wants to grab, for even minor violations. This bill assumes that big brother government has all the answers, even though some of the greatest discoveries of dinosaurs in pre-recorded history has been done by private individuals."

Frankly, I was surprised that the forfeiture provision for seizure of vehicle and property of the malfasant is also provided for in the House bill H.R. 2416, even if the violation is characterized as a "civil penalty", i.e., does not rise to the level of a crime (misdemeanor or felony). The forfeiture provision would put erring fossil collectors in the same peril as drug dealers!

Excerpt, from *AFMS Newsletter*, September 2003.

MWF NEWSLETTER 9/03

### CALL YOUR CONGRESSMAN

Call toll free to let your Congressman know that you want HR2416 and S546, the Paleontological Resources Preservation Acts **defeated**. These members should be lobbied again and again by your calls and letters (on these bills that are in House committees awaiting further action before they can be passed out of committee and on to the House Floor for a vote). **1-800-839-5276**

When you call, ask for the Congressman office at which you wish to leave a message, they will connect you quite quickly. Leave your name and address and message that you wish that House members to work for the defeat of both of these bills. Call often, not just once.

You may also call your Senators and let them know how displeased you are that S546 was allowed to pass the Senate and to please ensure that if a similar bill is reintroduced in the next session of Congress that he/she **vote against its passage**. If we succeed in stopping HR2416 in the House this time, you can be assured that a similar bill will be introduced again early in the next session of Congress.

## PALEOMAGNETISM

By Sam Shapiro

In the latter part of the 19th century, geologists continued to report climatological oddities from all over the world. Coal, for example, is formed from buried tropical forests, but there are extensive deposits under the thick ice of Antarctica. In frigid north Siberia there are limestones laid down on the bottom of tropical seas. On the Manhattan schist laid down in New York there are the scratches made by glaciers. There are tropical atolls in Canada, the till of polar glaciers in Algeria (John McPhee, *Basin and Range*).

In 1906, not quite a century ago, in a related puzzle, paleomagnetism was discovered. Whenever grains that contain magnetite are eroded down a mountainside, they come to rest faithfully pointing to the earth's magnetic pole, and at an angle that indicates the latitude of the rock at the time it was formed. These ancient rocks were then at a different latitude than where they were found. It turns out that the magnetic poles themselves have shifted, moving about, and reversing the North and South Magnetic Poles some 20 times since the Miocene Period, between five and 22 million years ago. How had this happened?

In an address to the German Geological Association in 1912, the meteorologist Alfred Wegener suggested an answer: the continents had been, and still were, drifting about. He pointed out that the eastern coast of Brazil would fit neatly into the hollow of West Africa, and that similar fossils were found in both areas. He noted that eels migrated from both Europe and the Americas to spawn in the Sargasso Sea. Unfortunately, the only explanation of the phenomenon that he proposed was that the continents were plowing through solid basalt, like gigantic ice-breakers, and his theory was universally ridiculed for the next half-century. (Benjamin Franklin had proposed a similar idea as far back as

In the 1960s evidence continued to pile up, from oil geologists, the exploration of the ocean depths, fossil discoveries by professionals and by amateurs like us. Data from Indian rocks indicating that the subcontinent had once been in the Southern Hemisphere provided one of the keys to the mystery. Wegener had been right. India, on the same tectonic plate as Australia, had drifted up at the rate

of ten centimeters a year, crashed into Asia, and raised up the mighty Himalaya Mountains. Mount Everest, six miles above sea level, is made of marine limestone! Italy, on the African plate, had driven like a nail into southern Europe and pushed up the Alps.

Subduction of some plates beneath others, the volcanic Ring of Fire around the Pacific, island chains such as Japan, the Philippines, the Antilles, ocean ridges spreading apart in the Atlantic and Pacific Oceans, geological history, ancient continents like Pangaea and Laurasia--it all fitted together beautifully. A high-school student today, or a member of the Michiana Gem and Mineral Society, can know vastly more and better geology than the chaired professors at Oxford, Cambridge, Harvard, Yale and Notre Dame did 50 years ago. It was an intellectual revolution like those of Copernicus, Newton, Darwin, or Einstein, and we older rockhounds have lived through it!

## PREHISTORIC RAINFOREST DISCOVERED IN COLORADO

In an area south of Denver scientists have discovered evidence of a rain forest which had developed surprisingly soon after the demise of the dinosaurs 65 million years ago.

It had long been assumed that the Earth took about 100 million years to recover from the asteroid collision with only a few plant varieties developing for a long time.

In the now dry prairie along Interstate 25 scientists found evidence that plant life was flourishing as early as 1.4 million years after the impact—towering conifer trees, huge ferns, blooming flowers. Kirk Johnson, paleontology curator at the Denver Museum of Nature and Science, reported the findings in the latest issue of *Science*.

The Castle Rock fossils will cause experts to reconsider the plant life of the lower Paleocene period immediately following the extinction of the dinosaurs.

Castle Rock, CO (AP) *Temple Telegram* (June 28, 2002)

## OBSERVING METEORITES AND COLLECTING MICROMETEORITES

A meteorite fell on Thursday, March 27, at about 1 a.m. Eastern Standard Time in NW Ohio. Apparently it was seen streaking across the sky and several impacts were reported.

Meteor sightings are not uncommon but tend to cluster around periods of showers, the best known of which are the the Perseid (July-August) and Leonid (November) showers. On ordinary nights, when the sky is clear, a patient observer can actually see up to 10 meteors an hour. Meteors become meteorites when they descend to the earth's surface.

Meteor showers occur at the same time each year and are named for the constellation from which the "falling stars" seem to originate. Meteor showers result when the leftover debris from comets enters the Earth's atmosphere. This happens if the Earth passes through a comet's orbit. Since our orbit and that of the various comets are pretty constant, the showers can be predicted to occur at specific times of the year. The intensity of the showers can vary depending on several factors.

In the wake of the recent fall, it was suggested that people go look for pitted grey rocks. While finding a large or even a small meteorite is an uncommon and noteworthy event, micrometeorites are actually relatively easy to find. The trick is to know where and how to look.

Tons of micrometeorites fall on the Earth every day. Unfortunately, even tons of material can be hard to find when it is the size of dust and it is dispersed over a very large area (the surface of the Earth). So, the trick is to collect in areas that sample a large surface, but provide a concentrated collecting area. The best of these are the areas under the downspouts of houses or buildings, since rainwater washes particles off the entire roof but concentrates them under the downspout. Tile roofs are best but shingled roofs work well, too.

First, collect the debris from under the downspout. Remove all the obvious junk (leaves, sticks, etc.) and place the remaining debris in a 9 x 12 glass pan or something similar. Next place a strong magnet into a plastic baggy. Drag the baggy-enclosed magnet through the debris, stopping periodically to

remove what sticks. Place these magnetic particles in a clean white saucer. Continue dragging and placing until you have several/many particles in your saucer. Not all of these will be micrometeorites. Some will be bits of iron or other magnetic items that are not extraterrestrial. To decide which of the bits are really micrometeorites, you must look at them with a hand lens or a microscope. True micrometeorites will be rounded and pitted. Pick these out and save them for your collection! They date from the formation of the solar system, 4.6 billion years ago!

Please note that this technique will only collect metallic meteorites since only they are magnetic. However, I have done this several times with various ages of children and, each time, we found several micrometeorites. It is important, however, not to overcollect your downspouts, since it can take several years for enough debris to accumulate to give good results.

### References:

Educator's Guide to micrometeorites:  
[www.solarviews.com/leng/edu/micromet.htm](http://www.solarviews.com/leng/edu/micromet.htm)  
*Ohio Beacon Journal* report of meteorite impact:  
[www.ohio.com/mid/beaconjournal/news/state/5494253.htm](http://www.ohio.com/mid/beaconjournal/news/state/5494253.htm) Meteorite Shower Calendar:  
[www.imo.net/calendar/ca/03.html](http://www.imo.net/calendar/ca/03.html)  
Science Information: [www.gsfc.nasa.gov/gsfed/educ/science/1999110-12-98.htm](http://www.gsfc.nasa.gov/gsfed/educ/science/1999110-12-98.htm)

*Rocky Reader* (Apr., 2003)

## ANCIENT BISON PROTEINS ISOLATED

Intact protein from a 55,000-year-old extinct bison has successfully been recovered from a specimen dug out of Siberian permafrost. The protein, osteocalcin, is involved in the formation of bones and was isolated by Christina Nielson-Marsh and colleagues at Newcastle University. They used a relatively new mass spectrometry technique to locate the protein. Proteins such as osteocalcin are much

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## CHALCEDONY

By George Judd G.G.

Chalcedony, or cryptocrystalline quartz, is a unique mineral with a fascinating history. Many of its colorful varieties were highly esteemed by early peoples, both for personal adornment and utilitarian articles. Today, even though it is found in abundance throughout the world and is one of the least expensive gem materials, it enjoys a greater popularity than ever before. The seemingly endless array of colors and patterns of color distribution in which chalcedony occurs presents a never-ending source of pleasure and a constant challenge to the amateur lapidary and rockhound.

Cryptocrystalline quartz is deposited at relatively low temperatures by circulating ground waters or by magmatic waters that have dropped to temperatures approaching those expected at the earth's surface. The earth's crust is so rich in silica that ground waters commonly approach saturation in silica content. As a result, chalcedony or other forms of quartz are often deposited in cavities in the near-surface rocks, such as wood, bone and shells, and replace them particle by particle with chalcedony. Chalcedony and/or crystalline quartz may fill or line cavities of any kind in near-surface rocks to form concretions or geodes.

### A. Chalcedony

In general usage, the terms "chalcedony" and "cryptocrystalline quartz" are synonymous; therefore, "chalcedony" may be applied correctly to any of the numerous varieties of this large mineral family. However, it also sometimes used as a specific variety name to refer to the semitransparent to translucent white to pale grayish-blue material.

### B. Chalcedony "Moonstone"

This variety is semitransparent, white to gray (milky) chalcedony that only vaguely resembles moonstone. It lacks the floating light effect that is characteristic of true adularescence in genuine moonstone.

### C. Chrysoprase

Semitransparent to translucent light to medium yellowish-green chalcedony is called chrysoprase. This term should be reserved for the natural material; it should not be applied to the dyed dark green chalcedonic quartz that is often sold as either "green onyx" or "chrysoprase."

### D. Carnelian

Semitransparent to translucent, red, orange-red to brownish-red or brownish-orange chalcedony is called carnelian. These colors may also be produced by heat treating nearly colorless chalcedony.

### E. Sard

Sard is similar to carnelian, except that its color is usually less intense; for example, more brownish and somewhat darker. It tends more to the dark-reddish colors and carnelian to the lighter, predominantly orange hues. Unfortunately, there is no distinct dividing line between sard and carnelian.

### F. Agate

The term "agate" is applied correctly to chalcedony in which the color is distributed in curved bands or layers. The banded appearance is distinguished by a difference in either color or translucency, or both, between adjoining layers of chalcedony. The word "agate" is often used somewhat loosely with a prefix to describe material that is not banded; e.g., landscape agate (containing inclusions resembling a landscape), fortification agate (composed of straight, intersecting bands), and moss agate or mocha stone (milky-white chalcedony with green, black or brown inclusions distributed in dendritic patterns).

Because of its rather porous nature, gray and white agate is particularly susceptible to dyes of various colors. The dye may color the material unequally, preserving the banded appearance, or it may penetrate porous material so evenly that a single color results.

### G. Jasper

The name "jasper" is applied to most of the semitranslucent to opaque chalcedonies that occur throughout the world in a wide variety of colors, often without a pattern of any kind. It may be red, yellow, brown, green, grayish blue or any combination of the above colors. It is frequently dyed blue and sold as "Swiss lapis" or "German lapis."

### H. Onyx

The only proper use of the term "onyx" is to describe chalcedony composed of straight, parallel bands. It is used incorrectly when applied to grayish chalcedony or agate that has been dyed to produce the solid-colored material known as "black onyx," "green onyx", etc. If the onyx exhibits bands of sard colors alternating with either white or black parallel bands, it is known as sardonyx. Carnelian onyx has alternate

parallel bands of carnelian colors with either black or white. White banding is more common than black; in fact, natural black chalcedony is not too frequently encountered.

#### **I. Chrysocolla Chalcedony (also called Chrysocolla Quartz)**

Translucent to semitranslucent, intense light-blue or blue-green chalcedony, the color of which is caused by minutely distributed chrysocolla (a copper silicate), is one of the loveliest varieties of chalcedony. In its finest quality it rivals the most beautiful turquoise in appearance. Unfortunately, however, it is quite rare.

#### **J. Bloodstone or Heliotrope**

Semitranslucent to opaque, dark-green chalcedony with red to brownish-red spots is called either "bloodstone" or "heliotrope."

#### **K. Agatized Wood**

Wood that has been replaced entirely by chalcedony resembles a patterned jasper, and is a rather attractive material for ornamental purposes. Almost all chalcedonic colors are represented, including red, yellow, black and brown. It is also called "silicified" or "petrified" wood.

### **PHYSICAL AND OPTICAL CHARACTERISTICS**

**Chemical Composition**—Silicon dioxide, or silica. The same composition as crystalline quartz.

**Hardness**—6.5 to 7.

**Toughness**—Good; about the same as crystalline quartz.

**Cleavage**—None.

**Fracture**—Conchoidal.

**Degree of Transparency** Transparent to opaque.

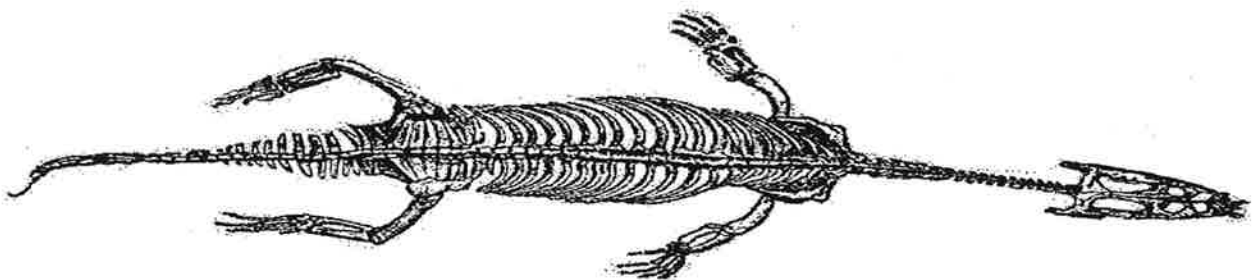
**Luster**—Dull to waxy on rough surfaces; greasy to vitreous on polished stones.

**References:** (1) L. Quick (1963) *The Book of Agates*. (2) J. Sinkankas (1962) *Gemstones of North America*. (3) GIA (1980) *Colored Stones - Assignment*.

### **HINTS & TIPS**

To get a better polish on material that will undercut, such as sagenite, moss, plume agate and porous woods, etc., try this. First elevate the slice on a small object such as a jar ring. Completely cover the slice with water in a flat pan with some detergent and a shake of Comet cleanser. Boil about 10 minutes, keeping the slide covered at all times. Remove the pan from the heat, leave the slice in the pan until water reaches room temperature. Go through fine sanding, clean well, and spray with a coat of clear plastic. Let dry, fine sand again lightly with polish. This 4-step process fills in the porous spots in the material, enabling you to polish the surface. You will end up with a beautiful polished piece. For example, this thin coat over the iron in picture wood eliminates the shiny iron streaks.

*T-Town Rockhound (Oct., 2001)*



**ICHTHYOSAUR**