NEXT MEETING: NOVEMBER 15, NORTH SCHOOL

ELECTION OF OFFICERS

Mineral of the Month: Staurolite. Please bring any samples you may have.
PROGRAM: Dr. David Westjohn of M.S.U. and USGS will speak on
Gold in New Zealand

to be followed by a mini-silent auction.
REFRESHMENTS: A-I please bring goodies.

NOMINATING COMMITTEE RESULTS

This year's nominating committee consisted of Ed Drown, Margaret Green, Neil Snepp, David Piotrowski and Jean Ann Wahl-Piotrowski. The following slate of nominations is presented:
President- Jean Ann Wahl-Piotrowski
Vice-President- Milt Gere
Recording Secretary- Sue Casler
Corresponding Secretary- Mary Gowans
Treasurer- Alan Hukill
3 Year Director- John Jurosek
Nominations from the floor are welcome the night of the election, provided that the nominee is willing to serve.

Please note that Roster Secretary and Laison are appointed positions. Gail Hopkins will move up to the 1 Year Director position; Alice Turner moves up to 2 Year Director.

MINI-SILENT AUCTION

It's been a while since we have had one of these. Any members are welcome to bring 10 items or less to offer at a silent auction during our refreshment/socialization time. Sellers will be responsible for collecting payment and making change.

A MINI REPORT ON A BIG SHOW-- Milt Gere

Our 2001 Gem, Mineral & Fossil Show turned out to be successful even with the big move, THANKS TO YOU and YOU and YOU!!!!

The Show's four Co-Chairs wish to thank everyone that was able to help with the show for taking the time and effort to do so. Your efforts really paid off.

Special thanks go to Neil Snepp and Roger Laylin for all of their preliminary and on-going work to see that the show took place. Many others worked 'extra shifts' too, and are to be thanked.

Some preliminary numbers reported at the club board meeting indicate 1,166 adults and 73 teens, totaling 1,239 bought tickets and one complimentary ticket was used, thus 1,240 attended the main show. Also, 1,444 children with 319 teachers and chaperones, totaling 1,763, attended the Friday morning free Children's Tour. Combined attendance of the Children's Tour and main show was 3,003.

Al Hukill reported that some bills had not been received yet, but preliminary show income exceeded expenses by $4,130. Even after bills are paid for the rental of tables and chairs, ads in shopper papers, and work by the MSU Geology Club, a profit should result.

Many favorable comments were received about the new location. These came from show attendees, teachers bringing their classes to the Student Tour, and our show dealers.

Now the club membership needs to decide ---- Next Year --- Will there be a show? Where?

Thanks again to all of you folks for making the Co-Chair's job easier!

IMPORTANT NOTICE to 2001 SHOW COMMITTEE:
Please submit all show bills to Alan Hukill be the November 15 meeting so that accounts may be closed!
2001 Show Board Wrap-Up Meeting: Dec. 6, 7:00-7:30, Meridian Twp. Service Center. This will be a brief gathering prior to the regular board meeting. Come prepared with written reports and recommendation

OCTOBER FIELD TRIP REPORT – George Heaton
Our field trip for October was our Annual Gem and Mineral Show on October 26-28. It appears to have been a successful show even though we had to find a new location only a month before our show date. It seems that everyone, including the dealers were very happy with the new location at the Ingham Co. Fairgrounds. Lots of rocks were sold on both the children's table and silent auction. George Heaton did quite well on the swap table.

I want to thank all those people who helped at the children's table, who helped set up and break down the children's table and who moved the stuff from and back again to Grit and Alice's place for storage.

There will be no field trips for November, December and January. The next field trip will probably be to the Michigan Natural Storage Co. in Grand Rapids in February. Hopefully, they will have their problems fixed by then and will be able to allow visits again. This traditionally has been our first real field trip of the year.

WANTED TO PURCHASE:
Mary Kay Bean is looking to purchase two specimens:
Chrysotite (sometimes called chrysolite)
Williamsite
Please phone Mary Kay on 351-1107.

DIGGING AWAY via AFMS Newsletter Sept. 2001 *by Mel Albright, AFMS Safety Chair*
There you are. Happily digging away in a dirt bank. Or, happily climbing and digging in a waste pile. Or, going for China as you dig deeper and deeper looking for the big bragging find. (Just a little deeper. The big find might be down just a little more.) Suddenly, the bank collapses - or, the pile slides and carries you down and maybe covers you - or, the sides of your deep hole collapse and bury you. To those brave souls who venture into mines, add, the sides collapse, and the roof falls. How do you protect yourself?

First understand the collapse is predictable. Anything that can be piled up can come down. Some things - like the waste pile, collapse easily. Others, like the mine wall, are harder to start down. The deciding factor is a thing called the angle of recline. (No, nothing to do with how far you tilt your easy chair.) What the angle says is that any pile subject to the action of gravity has a critical angle. If the pile's angle with the ground is above that angle, the pile collapses. If the angle is below that angle, the pile is stable. So, when you look at a road cut, the angles on the sides aren't what the contractor decided was handy. They are set by the dirt's angle of repose with a safety factor added. A pile of marbles has a very small critical angle (almost 0º). A stone bluff has a very high critical angle (almost 90º)

In EVERY one of the places mentioned above, the angle of repose will be passed and collapse depends only on something to get it started. It may take only one more shovel full or another foothold dug in or someone wandering by. If you're lucky, it won't happen. But, it is only luck protecting you.

So, whenever you are digging, keep safety in mind and take steps to protect yourself from harm if things let go around or from under you.

COLOR ENHANCEMENT OF TOPAZ via AFMS June 2001*by Dee Purkeypile*
from The Stone Chipper 4/9 (7th Place, 1998 AFMS Adult Article Contest)
Topaz is one of our most popular and affordable colored gemstones. Blue topaz is one of the most beautiful and commonly marketed colors of this remarkable gem. Although topaz naturally occurs in many different colors, blue topaz has dominated the jewelry market since the 1970's when a large number of deeply colored blue topaz crystals started appearing on the market. At that time there were no new mines or developments in existing mines to explain the sudden availability of this abundance of blue topaz. The production of blue topaz from colorless topaz with irradiation was first reported in 1957 by F.H. Pough, who was a contributing editor of many articles on minerals in the Lapidary Journal until only recently. Kurt Nassau, a research scientist residing in Bernardsville, New Jersey, rediscovered this information in 1974 when he was analyzing a faceted topaz that had been purported to be quartz. Since that time many hundreds of thousands of carats of treated blue topaz have been marketed by many sources. Nassau's research revealed that both natural blue and irradiated blue topaz are stable to light. This may account for its popularity with both jewelers and the buying public since of the three types of yellow to brown topaz, two fade in sunlight. Natural pink topaz is stable in sunlight but is extremely rare.

The ancient historian, C. Plinius Secondus (born 23 AD and died 79 AD during the eruption of Vesuvious) wrote an epic account of all that was known in his time and which entailed 37 volumes. Plinius reportedly gained his information by traveling and by reading over 2000 books. Some of these books discussed gemstone alterations: "Moreover, I have in my library certain books by authors now living, whom I would under no circumstances name, wherein there are descriptions as to how to give smaragdus (emerald, in part) to crystallus (rock crystal) and how to imitate other

gems: for example, how to make sardonychus (sardonyx) from sarda (carnelian, in part sard): in a word, to transform one stone into another. To tell the truth, there is no fraud or deceit in the world which yields greater gain and profit that of counterfeiting gems."

With the detonation of the first atomic bombs in the deserts of the American west, the course of human civilization was irrevocably changed. That change also brought along with it much experimentation as regards the effect of radiation on all objects precious or common. It was only natural that man would attempt to alter precious stones with this incredible energy source. None of the many gemstone enhancement processes used on other gemstones appears to have been used on topaz except for the dyeing of water worn pebbles in indigo dye pots.

Typically, colorless or pale-colored topaz is heated to 200 to 300 degrees centigrade for several hours. The longer the stone is heated the deeper the color change will occur in the stone. The stones will turn to a yellow to brownish green to a dark brown color. These colors however are not stable and will eventually fade to clear unless the stones are irradiated. The irradiation process essentially eliminates the yellow-brown and green colors and leaves a stable blue color, which will not fade unless subjected to temperatures of 500 to 600 degrees centigrade.

Topaz is irradiated by one of three energy sources: gamma rays from the mass 60 isotope of cobalt (Co-60), high-energy electrons from linear accelerators, and neutrons from nuclear reactors. Gamma irradiation is the most common and least energy costly method. The other sources of irradiation can produce deeper blues, however, they are very energy consumptive and in the case of neutron irradiation, most often unavailable to commercial interests. Gamma cell devices are commercially available, require little upkeep and continuously produce rays over many years as the Co-60 slowly decays. The gamma rays penetrate the stone very deeply and produce uniform coloration if the stone is uniform. What little heat is generated by the exposure to Co-60 is distributed uniformly throughout the stone, which significantly reduces the chance of cracking the gem material. The heat generated is a function of the time of exposure and the dosage of the radiation source. Cracking will usually be prevented if the dose is kept to less than 5-megarads per hour. The longer the topaz is exposed to the gamma source the deeper the blue can be obtained. However, the typical light blue color is the most often seen result of gamma exposure. The cooling down time for gamma irradiation is on the order of several weeks to several months as opposed to electron or neutron irradiation which may take up to a year and a half to cool down to safe handling levels. Irradiated topaz is so common that it is one of the only gemstone that is consistently checked at U.S. Customs for excess radiation.

Unfortunately, other irradiated stones have been allowed to enter the U.S. simply because Customs has not been aware of the massive abuse of irradiation with other gemstones in foreign countries that do not properly control their irradiation sources. AD in all, topaz is one of our least expensive precious gems that is still in high demand because of its intrinsic and enhanced beauty.

HALL'S GAP MILLERITE LOCALITY CLOSED *via AFMS 6/01*
by Bill McKenzie (Lexington, KY) from rocksandfossils@egroups.com

Alas, It has finally happened! The world-renowned Halls Gap millerite geode locality is now closed to collectors. On April 3 and 4 the Highway Department cleaned the rubble as they have every 3 years or so for as long as I can remember. This time they posted 2 signs facing the highway on the eastern side, sort of bracketing the deepest part of the cut. The signs read "KEEP OUT-FALLING ROCK".

I collected there the Sunday after the signs were posted with no problem - I figured it was too soon for word to have gotten around to local officials, etc. When I attempted to collect yesterday, I was there about 1/2 an hour when a deputy sheriff stopped with flashing lights and I was told to leave. He was pleasant enough about it, but he said the highway department had asked them to enforce the posting.

When I asked about the west (unposted) side he said they don't want any collecting at the site due to the danger of falling rock and they are making regular patrols. What a shame! The end of an era has arrived.

US 27 is supposed to be enlarged to four lanes in a few years. A window of opportunity may open again at that time.