

Rocky Reader

The Monthly Newsletter Of The
Toledo Gem And Rockhound Club

Volume 45(5)

May, 2008

President

Jim Leslie
517-265-6284
jleslie@adrian.edu

Vice-President

Ruth Jacobs
419-381-0253

Treasurer

Steve Shimatzki
419-861-0147
sjs132@access Toledo.com

Secretary

John Capuano
419-882-1733
jscapuano@yahoo.com

Sgt.-At-Arms

Carla Burleson
419-533-7341
mamamae162@msn.com

Board Members

Harold Burleson
419-533-7341
John Kalinoski
419-381-1439
Mike Mayers
419-885-5613

Past President

Larry Barrick
419-734-2093
barrickent@cros.net

Show Chairpersons

Suzanne Shimatzki
419-861-0147
sshimatzki@gmail.com
Jerri Heer
419-389-9204
jheerx6@aol.com

Membership/Editor

Debra Hoffmaster
517-265-6284
dhoffmaster1@verizon.net

Sunshine

Lucille Burgy
419-893-3437

Craft Center phone - 419-531-8124

website: Toldeogemandrockhoundclub.com

The May Club meeting begins at 6PM with a potluck.

Everybody Bring a meat dish plus:

A dessert if your LAST name begins with A-J

A vegetable dish if your LAST name begins with K-Z

Please remember to bring your own table service

THERE WILL BE A **SHOW WORKDAY SATURDAY MAY 31,** BEGINNING AT 9AM TO CLEAN AND ORGANIZE THE ANNEX AND COLLECT DONATIONS FROM THOSE WHO WISH TO BRING THEM.

Toledo Gem and Rockhound Club Meeting Minutes April 16, 2008

Pledge of Allegiance

Program: gemcrafter auction

Secretary report - motion to accept March minutes passed

Treasurer report - motion to accept monthly summary passed.

Announcements - May will be potluck dinner. Starts at 18:10 hrs. Will need some items to be donated for open house raffle.

Old Business - Correction to last month meeting. The first Sunday in May is not Arts in the Garden. The first Sunday in May is Open Arts Day, which is for children.

New Business - The TBG is now with the park's system, they now will have to pay for their water use.

Debbie Hoffmaster is retiring as the Rocky Reader editor. We will need a member to replace Debbie starting in or after September.

TBG - Gemcrafter - On May 5th Anthony Wayne School will have an Art Show.

Will need volunteers for Mother's Day plant sale at TBG. May 17 and 18 will be Spring open house from 10:00 to 17:00 hrs. Members will be demonstrating operation in craft center. Chet needs to know if anyone worked at the shop on the first Sunday in Jan., Feb., March or attended any meeting at the park.

Beaders - starts at 18:30 hrs., will be doing loom work

Faceeters - no report

Membership - 44 member, one junior.

Rocky reader - deadline is April 23, 2008.

Metalcraft - will meet at normal hours.

Sunshine - Ruth Jacobs mother passed away.

Field trips - Joel Vicary is running a trip to NE lower Michigan. Meet at noon at Standish Burger King.

Show - Jerri needs help on the Annex A on Saturday, May 31, at 9:00 hr.

Open House - Members can have a table free to use, let Jerri or Carla know if you need one.

Meeting adjourned.

Gemcrafter auction started.

Submitted by John Capuano, Club Secretary

CLASSES

The following schedule is a listing of upcoming classes. To enroll, please **send the all fees to the instructor**. Fees must be received, at the latest, **two weeks prior to the class**.

May 17, 2008. 10AM. Beez to Butterflies bracelet. Instructor Kathy Petersen. Fee \$60.00. This is a chain maille bracelet, that looks like side to side Byzantine links but is much less complicated than byzantine. Fees deadline is **three weeks before class**.

June 7. 10AM. MSHA Mine Safety Class. Instructor Joel Vicary. To register or for more information call Doris Brzezicki, State Line Club, 517-263-1669

June 7. 1PM. Soapstone Carving. Instructor Sandy Cline. Fee \$15. To register or for more information call Doris Brzezicki, State Line Club, 517-263-1669.

June 28 & 29. MGAGS Rockhound Seminar. Classes on Faceting, Wire wrapping, silversmithing, Gem Trees, Lapidary and more! Goodwin High School (SW metro Grand Rapids), 50 - 35th St., SW, Wyoming, Michigan. Saturday 9-5 & Sunday 9-4. For more information contact - Dan Brown, 734-421-8159 or Bill Hapiuk, mgags2008@yahoo.com. For schedule & advance tickets (\$15/day or \$25 for both days) contact Bill Hapiuk, 26099 Dover St., Redford, MI 48239.

November 15, 2008. 10AM. Vertebrae bracelet. Instructor Kathy Petersen. Fee \$60.00. This is a modified 4 in 1 chain maille bracelet, with an inner ring, also called vertebrae pattern.



Spoon jewelry created by Su Drake in the March class.

Thelma Postlewaite's Family News

Kaelea Main	5-2	Gayle O'Riordon	5-10
Michael Goetting	5-4	Bill Newell	5-17
Benjamin Drake	5-5	Christen Largent	5-17
John Hull	5-8	Wedad Ghanime	5-19
George Burns	5-9	Krysta Turner	5-25

Ruth Jacobs' mother has died

Submitted by Lucille Burgy, Sunshine

GARDEN NEWS

Volunteer Hours - If you help out at open houses, Heralding, plant sales, etc., Please **MAKE SURE that you fill out a volunteer form**. These are **available from Chet** and may be turned in to him. Volunteer forms are collected 4 times each year for the months/quarters JanFebMar/ AprMayJune/ JulyAugSept/ OctNovDec/.

FACETEERS

Faceteers meet on the second Thursday of the month at members' houses. Contact Don Ault or Dick Bower for more information.

FIELD TRIPS

The next local MSHA Mine Safety Class will be on June 7 at 10AM at the State Line show. To register or for more information call Doris Brzezicki, State Line Club, at 517-263-1669

Agate Rendevouz 2008, a ten day inter-federation field trip campout, will be held on August 23-September 1 at Apache Creek, New Mexico. There will be rock collecting and many attractions to go to. For more information email rockymountainrockhounds@yahoo.com or contact Yonis Lone Eagle,

Rocky Mountain Federal Mineral Society and New Mexico/Texas State Director at 505-860-2455. Please RSVP by August 20 if you plan to come.

Reprinted from *Greater Cincinnati Lapidary and Faceting Society Newsletter*, Mar, 08

BEADERS

The Beaders have re-started. We meet 6:30 PM on the third Monday of the month. Nancy Grove, Moderator

GEMCRAFTERS

The gemcrafters meet on Wednesdays (except the third) at 7PM in the craft center. Chet can give classes on any lapidary topic. If there is something that you are interested in learning, contact him. Chet King, Jr., moderator

METALCRAFTERS

The metalcrafters will meet on the first and third Sundays at 1:30 and the second and fourth Thursdays at 6:30. Deb Hoffmaster, moderator

Coming Events from Chetty King's Flyer Table

- May 3.** Newark Earthworks Day. Newark Earthworks, Newark, OH. Open 9AM. Ceremonies include ribbon cutting, Aztec dancers, presentations by professional anthropologists & archaeologists. For more information see www.OctagonMoonrise.org or call 740-364-9574.
- May 3-4** Geofair 2008. Cincinnati Gardens, 2250 Seymour Avenue. Saturday 10-6, Sunday, 11-5 Adults \$7, 2-day pass \$10, Children \$2, Scouts in uniform free. For more information, see www.geofair.com or call 513-575-1990.
- May 9 (Friday) 7:30 pm.** Joan Mertens, Ph.D., Curator of Ancient Art at the Metropolitan Museum of Art in New York City, NY. "The New Greek and Roman Galleries at The Metropolitan Museum of Art An Array of Challenges." Toledo Museum of Art, Little Theatre, 2445 Monroe St., Toledo.
- May 16-18.** 2008 Southeastern Michigan Gem and Mineral SHOW. Southgate Arena, 14700 Reaume Parkway. Friday 4-8, Saturday 10-6, Sunday 11-5. Adult \$4, Senior Citizens \$3, Teens (13-17) \$1, Kids (under 13) FREE! For more information, contact Norm Hanschu, 6607 Sturbridge Lane, Canton, MI 48187, (734) 455-8596, nwhanschu@prodigy.net, or Mike Bomba, (313) 381-8455.
- May 17-18,** Parma Lapidary Club Show, Cuyahoga County Fairgrounds, 164 Eastland Road (use Bagley Road entrance.) Saturday 10-7, Sunday 11-5. Adults \$5, FREE to Kids 12 or under (with an adult) or Scouts in uniform. For more information see www.parmalapidary.com or call 440-949-8242,
- May 31 & June 1.** 2008 Central Ohio Mineral, Fossil, Gem & Jewelry Show, Veterans Memorial, 300 W. Broad St., Columbus, OH. Saturday, 10- 6, Sunday, 11 - 5, Adults \$7.00 (2-day pass \$12), Senior Golden Buckeye discount, Youth 6-16 \$3.00 (under 6 free), Scouts & 4-H in uniform free
- June 6-8.** State Line Show. Junior Fair Building, Fulton Co. Fairgrounds, Wauseon, OH. Fri. noon - 7, Sat 10-7 and Sun 11-4. Parking and admission are free.



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June 28 & 29. MGAGS Rockhound Seminar. Classes on Faceting, Wire wrapping, silversmithing, Gem Trees, Lapidary and more! Goodwin High School (SW metro Grand Rapids), 50 - 35th St., SW, Wyoming, Michigan. Saturday 9-5 & Sunday 9-4. For more information contact - Dan Brown, 734-421-8159 or Bill Hapiuk, mgags2008@yahoo.com. For schedule & advance tickets (\$15/day or \$25 for both days) contact Bill Hapiuk, 26099 Dover St., Redford, MI 48239.

July 10 - July 13, 2008. Agate Conference - the largest agates-only event ever held in the US Weis Earth Science Museum, The University of Wisconsin - Fox Valley, Menasha, Wisconsin Friday -Sunday 10-6; Monday 10-5. Adults \$3.00, children 21 & under Free. For more information see www.weismuseum.org or e-mail fox-wesm@uwc.edu 920-832-2925.

Ice Ages, Global Warming and Penguins

by Stan Woollams with additions by Dawn Niedermiller
from "The Conglomerate", volume 70, number 9 (January, 2008), pages 3-5

Stan Woollams gave a very interesting, informative, and engaging presentation last month as he talked about the factors involved in the formation of ice ages and discussed the concept of global warming. Accompanying his presentation were many spectacular scenic photographs of Antarctica from his travels to this continent. And we can't forget about the penguins. Stan gave us all an education (with wonderful photos) about the many different types of penguins that inhabit this southern land.

The earliest well-documented ice age, and probably the most severe, occurred from a minor ice age, the Andean-Saharan which occurred from 460 to 430 million years ago (mya), during the Late Ordovician and the Silurian period. The Karoo Ice Age between 350 and 260 mya (during the Carboniferous and Early Permian periods) had extensive polar ice caps. The present ice age began 40 mya with the growth of an ice sheet in Antarctica. It intensified 2.58 mya with the growth of ice sheets in the Northern Hemisphere. In the last billion years, about half the time, the earth has been completely ice free.

There is evidence of past Ice Ages. First of all, there is geologic or physical evidence such as rock scouring and scratching, and the deposition of till (unsorted glacial sediment). This deposition of till forms glacial features such as moraines (hills) and drumlins (whale-shaped hills). Furthermore, the thick ice sheets of glaciers carve out u-shaped valleys and leave behind what are called glacial erratics. An erratic is a rock fragment carried by glacial ice, deposited at some distance from the outcrop from which it was derived, and usually ends up sitting on bedrock of a different rock type. An erratic is like an 'error' or a rock that ends up where it doesn't belong. They are very interesting rocks.

Secondly, there is chemical evidence of glaciers. Variations exist when comparing the ratios of isotopes (carbon¹² / carbon¹⁴ and oxygen¹⁶ / oxygen¹⁸) in ice, sediment cores, and sedimentary rocks. (More O¹⁶ is found in ice from colder temperatures).

Thirdly, there is paleontological evidence as seen by changes in the geographical deposition of fossils--we see cold-adapted organisms nearer the equator more than usual and we see warmth preferring organisms becoming extinct or squeezed into lower latitudes. Studies into the most recent 2.58 million year glacial era give clear results allowing extrapolation into the earlier episodes.

Stan discussed a chart that shows the **normal pattern** of fluctuating up-and-down temperatures for the past 5 million years. However, starting about 2.58 mya, the trend has been toward colder temperatures and wider fluctuations with an average loss of about 10°F. Cycles of glaciation interspersed with interglacial warming occur with ice sheets advancing and retreating on 41,000 and 100,000-year time scales. We are presently in an interglacial period. A recent estimate predicts that under "normal" (that is, without human influence) we will continue with slow warming until about the year 2600 and the next glacial episode will begin in about 18,000 years.

Causes of Ice Ages Stan presented six causal factors involved in the evolution of ice ages and their converse, global warming. They are listed below and briefly summarized.

1) Positions of the Continents The geological record appears to show that ice ages start when the continents are in positions which block or reduce the flow of warm water from the equator to the pole. This allows ice sheets to form when a continent sits on top of a pole (Antarctica), when a polar sea is almost surrounded by land (today's Arctic Ocean), and

when a supercontinent covers most of the equator (Rodinia during the Cryogenian Period). Since the first two examples exist today, it is expected that the current ice age will continue for some considerable time.

2) Uplift of Continental Blocks The Himalayas and the Tibetan plateau began their significant uplift about 40 mya (when the latest cooling trend started in the mid-Eocene), creating the highest landmass on Earth (still rising 5mm/year). This plateau alters the flow of the jet stream and significantly increases the Earth's total rainfall and therefore the rate at which CO₂ is washed out of the atmosphere (which leads to its incorporation in the Earth's rocks as carbonates). Overall, decreasing the greenhouse effect. Over the past 15 million years, the continents have risen about 600 meters (2000 feet) on average. Similar tectonic uplift appears to have been involved in the three other long, ice age intervals.

3) Greenhouse Gases

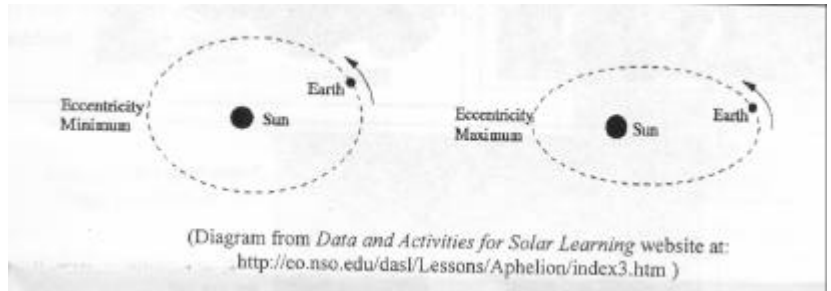
Solar radiation is predominantly short wave, while heat radiated from the Earth's surface is long wave. Water vapor, carbon dioxide, methane, and other gases of the atmosphere absorb this long wave radiation and so retain warmth for the Earth. Average global temperature is ~ 15°C; without this absorbing atmosphere it would be < 0°C! CO₂ tends to fall with the advent of an ice age and rise with the retreat of the ice sheets. Today, CO₂ levels are as high as those levels found any time in at least the last 650,000 years. And, they are rising quickly due to human burning of fossil fuels. It appears likely that this warming effect will overcome the other trends that would keep us in a cooling phase.

4) Solar Energy Output Astrophysicists believe that the sun's output increases by about 10% per billion years. In about one billion years, the additional 10% will be enough to cause a runaway greenhouse effect on Earth -- rising temperatures produce more water vapor, (which is a greenhouse gas much stronger than CO₂). *** There are also shorter term variations in solar output. Recent evidence shows such an increase in the past 15 years or so which may be responsible for about 1/2 of the recent increase in global temperatures.

5) Volcanism The largest known volcanic events, the flood basalt events which produced the Siberian and Deccan traps, are both associated with mass extinctions and are not associated with ice ages. The huge amounts of dust expelled into the air that block the sun are probably not enough to initiate an ice age, but can trigger warming trends by the release of methane into the air. Massive volcanic activity during the Paleocene broke Greenland apart from Europe--opening up the North Atlantic. The magma heated marine sediments rich in organic matter, unleashing more than 1,500 billion tons of carbon into the atmosphere as CO₂ and methane (CH₄). Those greenhouse gases triggered the Paleocene-Eocene Thermal Maximum.

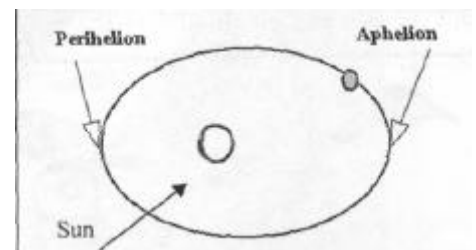
6) Variations in Earth's Orbit (Milankovitch Cycles) Lastly, there are three cyclic variations of the Earth's orbit around the sun which are considered factors that cause ice ages and global warming. Each cycle has a different length-- some times they reinforce and at other times they (partially) cancel each other. They probably are only strong enough to affect the timing of glacial and interglacial periods within an ice age.

The first cyclic variation has to do with the **tilt of the Earth**. The tilt varies from 21.5° to 24.5° over 40,000+ years. Currently, we are at 23.5°. Less tilt = milder summers with less snow melting (which is more important than less snow in the winter) so it's cooler!



The second variation is the **eccentricity of the Earth's orbit**. The Earth's orbit around the Sun changes from more circular to more elliptical by about 2% over a period of approximately 100,000 years. This moves the Earth closer to or farther from the Sun which varies the amount of solar radiation received by the Earth. This affects the strength of the seasons. The earth is at a minimum eccentricity now.

Precession is the third variation of the earth's orbit around the sun. It is the rotational wobble of the earth as it spins on its axis. The Earth's axis wobbles or moves in a circle like a spinning top over a period of 26,000 + years. This affects the amount of solar radiation the Earth receives at the poles. The Earth is closest to the Sun (perihelion) in early January and farthest from Sun (aphelion) in early July. The Earth's perihelion slides around the Sun in 110,000 years and the relation between perihelion, aphelion and the Earth's seasons changes over a 21,000 year cycle.



Currently we have mild summers, but in 11,700 AD, the perihelion will be at our summer solstice in June = hot summer. Serbian Astronomer, Milutin Milankovich tried to answer the question of why glaciers spread and what leads to periodic climate change. He linked them to precession, the concept previously discovered by the Greek Astronomer and Mathematician, Hipparchus.

(Information in article provided by Stan Woollams and expanded upon by Dawn Niedermiller on this page (heading #6) only)

To learn more about 'Precession of the Earth', research books or the Internet.

One good on-line source (used for diagram above) is: <http://www-istp.gsfc.nasa.gov/stargaze/Sprecess.htm>

President's Column by Stan Woollams

from "The Conglomerate", volume 70, number 9 (January, 2008) pages 1-2

In my presentation on "Ice Ages, Global Warming, and Penguins", I noted that there were six causal factors involved in the evolution of ice ages and their converse global warming. Two of them--the positions of the continental masses and the rise or fall of areas (such as mountains) within the continents are very long-term effects causing changes over millions of years over which we have no control. The third, solar energy output, is similar in that there are long-term trends but also occasionally containing a much shorter range component such as we are now experiencing with the recent increase in solar output. But again, there is nothing we can do about it. This is also true about the next two factors (variations in the earth's orbit and the eruptions of volcanoes) even though they are of relatively short term in their effect--measured in the thousands of years. The final factor greenhouse gases--has both short term as well as long term effects: but is the only one where we humans have a personal impact by our utilization of fossil fuels and the resultant effect on CO₂ levels.

Coincidentally, the day after my presentation I read the January, 2008 issue of Discovery where they listed the 100 Top Science Stories of 2007. #1 was China and its impact on the global environment caused by all of their polluting coal plants etc. #4 was the rapidly expanding Arctic thaw. #6 was the increasing acceptance of Conservation as a primary consideration. This was highlighted by the award of the Nobel Peace Prize to Al Gore for his work in promoting conservation. #17 noted the probable connection between pollution and the increasing proportion of female babies. #19 pointed out the correlation between increased industrial soot and Arctic melting. #21 is a two page spread they call "Quantifying Global Warming" which demonstrates 14 different situations around the world. #23 deals with the acid rain which has intensified the threat to marine life. #30 notes how hurricanes influence climate and how global warming will further intensify the process. #40 describes how newly invented small ceramic tubes can help reduce carbon dioxide pollution. Nine of the first forty, including #1!

To echo Al Gore in his acceptance speech, "We have a purpose. We are many. For this purpose we will rise, and we will act."

As an addendum to my presentation I did some Internet research regarding the recent sinking of the MS Explorer in the Antarctic. The guess is that the ship hit an underwater peak of a large submerged iceberg which was, therefore, powerful enough to cause a "fist" sized hole in the hull. Argentinean observers on the scene when the ship was sinking thought they saw some "more extensive" damage than that. This is the first such ship to go down in the Antarctic but now that the very large cruise ships with 3000-5000 passengers are going down there (and they do not have reinforced hulls) it is feared that a serious disaster might occur. Earlier history of problems are few but last years 38,000 passengers to Antarctica is thirty times as many as just a couple of decades ago. For the record: a Norwegian ship ran aground in January of 2007 with all the passengers and crew rescued without problem. In addition, in the Arctic there have been two ships which ran aground in the last ten years with no loss of passengers. Just this last August another ship in the Arctic ran into trouble when an iceberg calved near their ship throwing a wave of ice and water onto the deck injuring 23 people--two seriously. Also, the reports I read about the latest ship sinking all noted the fairly calm seas and low wind. It was cold, though, and people were quite chilled by the time they were rescued 4-5 hours after sitting in open rafts. So, as Antarctic and Arctic visits increase, there are increasing risks for pollution in those pristine areas as well as significant risks for the visitors.

Stan Woollams

Toledo Gem & Rockhound Club Presents:

Beads, Gold and Gemstones !! Tradegoods through the Ages

*Our 37th Jewelry, Gem & Mineral Show & Sale
September 5, 6 & 7, 2008*

Stranahan Theater Complex

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Sunday 11AM – 5PM*


*Donations:
Adults: \$4.00
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Children Under 12w/Adult FREE
Scouts & Soldiers in Uniform FREE*

Contact Info: www.toledogemandrockhoundclub.com, 419-531-8124 or jheerx6@aol.com

May

2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4 Metalcraft @ 1:30	5	6	7 Gemcraft @7	8 Metalcraft @ 6:30	9	10
11	12	13	14 Gemcraft @7	15	16	17 Club open house 10-5
18 Club open house 10-5	19 Beaders @ 6:30	20	21 Club meeting @ 7	22 Metalcraft @ 6:30 Faceteers @ 7	23	24
25	26	27	28 Gemcraft @7	29	30	31 Show workday 9AM

Toledo Gem And Rockhound Club

 The Rocky Reader
 Debra Hoffmaster, ed
 950 Michigan Ave
 Adrian, MI 49221