The Topeka Gem & Mineral Society, Inc.
1934 SW 30th St. Topeka, KS 66611
Rock2Plate@aol.com

THE GLACIAL DRIFTER

www.topekagemandmineral.org
Facebook: Topeka Gem and Mineral Society Field Trips

The Glacial Drifter, Vol. 55, No. 4, May 2012

The Topeka Gem & Mineral Society, Inc.
Organized December 3, 1948
Member of Rocky Mountain Federation of Mineralogical Societies
American Federation of Mineralogical Societies

The Purpose of the Topeka Gem & Mineral Society shall be exclusively educational and scientific: (1) to promote interest in geology and the lapidary arts; (2) to encourage the collection and display of rocks, gems, and minerals; (3) to encourage field trips and excursions of a geological, or lapidary nature; (4) to encourage greater public interest and education in gems and minerals, cooperating with the established institutions in such matters.

Meetings: 4th Friday of each month, except December, unless notified of a change, September – May, 7:30 pm, Stoffer Science Hall, Room 138, Washburn University. Picnic meetings held during summer months, June – August.

Dues: Individual, $15.00; Husband and wife, $20.00; Junior (under 18 years of age), $5.00. Dues are due in December for the coming year; they are delinquent after the January meeting. Send dues to Millie Mowry, Treasurer 1934 SW 30th St., Topeka, KS 66611.

2012 OFFICERS AND CHAIRS

President	Mike Cote`	220-3272	Cab the Month	Debra Franz/Fred Zeferjohn	862-8876
1st Vice Pres.	Dave Dillon	272-7804	Field Trip Coordinator	Larry Henderson	272-8444
2nd Vic Pres.	Carolyn Brady	233-8305	Publicity	Christy Bien	608-1890
Secretary	Cinda Kunkler	286-1790	Welcome/Registration	Debra Franz	862-8876
Treasurer	Millie Mowry	267-2849	Property	M. Cote`/D. Dillon	220-3272
Directors	Jim Mowry	267-2849	AFMS Scholarship	Louellen Montgomery	354-1290
	Clyde Burton	478-4778	Editor/Exchange Editor	Millie Mowry	267-2849
	George Reed	836-9277	Show Chairman	Harold Merrifield	286-3548
Historian	Freda Tabor	273-0691	Show Dealer Chrm.	Dave Dillon	272-7804
Federation Rep	Harold Merrifield	286-3548	Show Secretary	Cinda Kunkler	286-1790
Corporation Agent	Millie Mowry	267-2849			
Librarian	Jim & Millie Mowry	267-2849			

Area Code for all numbers is 785.

Meeting Minutes of the Topeka Gem and Mineral Society

Meeting of the Topeka Gem and Mineral Society – April 27, 2012

Mike Cote' called the meeting to order – after a delay due to tornado warning!
May Springer reports there are 15 members and 2 guests present. Door prizes were awarded.
Dave Dillon made a motion to accept the minutes of our last meeting as printed in a hand out at the meeting, motion carried.
Millie Mowry gave the treasurers report. Dave Dillon moved and Harold Merrifield 2nd to accept the report, motion carried. No bills were presented.
Correspondence – Flyers for upcoming show. It was noted that John Hawkins wife had recently passed away.
Committee reports:
Larry Henderson-the field trip this Saturday, will be a opportunity to work at Camp Hammonds Adventure Days. He also reported on the trip to Arkansas.
Show Committee – Harold Merrifield reported we have 10 dealers. He is going to call two others.
With no further business Cinda Kunkler moved and Rick Knight 2nd to adjourn to our program. The program this evening is Dr Reese Barrett from the Sternberg Museum.
There was no Cab of the Month contest this evening due to the weather.

Respectfully submitted by Cinda Kunkler, Secretary

From the President's Rock Stash

Dear members, Everything is going well. I was really happy with last months program as it was very interesting program presented by Dr. Reese Barrett from the Sternberg Museum. The members I talked to were real happy too. The silversmithing and lapidary classes are going well. Everyone one seems to be pleased with them. There are some good jewelry and cab coming out. That's all for now. Hope to see ya all at the next meeting. Later

Mike Cote & the Rock Stash

Corrections / Additions to the Directory

Iona Faulk, email is ionafaulk@aol.com

Rejoining: Donald & Ethel Mock

LESSONS

Classes are now being held at Mike Cote house. His mailing address is 4910 Clark Rd. Meriden, Kansas 66512. He has a large Morton building that we are using. Everyone is very pleased with the larger space we now have. It is still on Tuesday night from 6-9. Do a map quest to get driving directions or call Mike at 220-3272.

Dave Dillon, davidd5124@aol.com Mike Cote`, mcote35@yahoo.com

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Dates to Remember

Show Dates:

May 25-27 Oklahoma City, OK. 3001 General Pershing Blvd. Free Admission, www.egishows.com for more information.

May 26-27 Fort Worth, TX., Will Rogers Memorial Center, 3401 W. Lancaster, www.frotworthgemandmineralclub.org , for more information.

June 22-24 Colo. Springs, CO. Western Museum of Mining & Industry, 225 Northgate Blvd. info@csms.com or www.csms.us

July 14-15 Tulsa, OK., Rock & Mineral Show, Exchange Center 1, Expo Square, 21st & Yale, www.ttownrockhound.org for more information.

Scheduled TGMS Field Trips

We meet at McDonalds, 11th and Kansas Ave.

May 26	Local Field Trip	8:30 a.m. McDonalds
June 23	Local Field Trip	8:30 a.m. McDonalds

Other Opportunities

May 18-20 Joplin, MO Swap Meet

Anyone interested in a trip to South Dakota, for Fairburn Agate, with a stop at Ashfall Fossil Beds Nebraska State Historical Park, contact me.

What to bring on Fossil Hunting Trips:

Something to pry fossils out of the ground. Long screwdriver, rock hammer, or pry bar
Something to put items in. Plastic bags, boxes, bucket, Eye protection, Magnifying glass,

Personal gear:
Hat, to shade sun, Suntan Lotion, Bug repellent. Wear sturdy shoes.

Trips dates are tentative and subject to additions and change. Call or e-mail Larry if you have an interest in any of these trips 272-8444 or LHenderson85@gmail.com

Larry Henderson, Field Trip Chairman

We need your **BEST CHOICE UPC Labels** --- Bring them to the monthly meeting.

TLC Report

Jim Mowry, recently fell and broke his left arm in two places. He is now home and recuperating nicely.

DRY SANDING METHOD
By: Bill Myers

One of the things we have tried and then continued to use is the dry sanding of stones. This started as an attempt to get a finish on jade. Mostly at that time the jade was from either Wyoming or Siberia. Siberian jade was available in those times and a few of the better dealers carried it. Wet sanding did not give us the results we wanted. Dry sanding was definitely better. We bought a faceplate and with an old motor, made our first dry sander. Later machines we have made are simpler, and give very good results. The faceplates are still available today, and is one way to have a less expensive machinery cost. After getting the faceplate and sponge pad, the balance of the needed parts are available at one of the local stores- Walmart is one.

We have found that a ¼ hp. Motor is large enough for this and rpm is important. For the 100, 200, grit, use the wet or dry discs, and for the final stages, sand paper, 3M wet or dry is a good choice. Lay a disc on top of the sheet, mark with a pencil, then, cut out with scissors. For the 100, 200 stages, if you use 1170 speed (2 speed motor) you can get more mileage from them. For the final stages, you need 3, 200, 320 & 600. The 220 sand paper stage will give you a better finish then a 220 hard disc. When dry sanding, always do most of the work at the 4 to 5 inch diameter, use the inner and outer areas for either slow or fast cuts. Always finish that stage in the 4 to 5 inch area where the dust line is at, because the existing dust is a definite shortener of the cutting tooth which allows you to get a much finer finish. This is imperative on the final stages, as it gives the option of having a much finer finish for the polish stage.

When installing a sponge pad to a faceplate, it is important that the circular edges meet all the way around. Even though the diameter of the pad is usually larger than the disc, one sometimes errors in matching exactly, One way we have found that always works is to have the sponge pad and faceplate surface clean, place a piece of the foam sheeting on the table, and cover with a piece of paper. Lay the sponge pad on this surface and place 4 toothpicks at intervals around the pad (vertical into the foam pad.) Next cover sponge pad and faceplate surface with contact cement and when ready, one can lay the faceplate onto the sponge pad and make sure that there is total adherence. Any lap over of the sponge pad can be trimmed off till you have a perfect mating. At this time, re-clean the face of sponge pad, and take a piece of canvas that has been washed, and lay on paper and coat the surface of the sponge pad and canvas, with contact cement, then install on the face of the sponge pad. This will give you a much longer life to your sponge pads. Again, the excess canvass can be cut off with a sharp knife or scissors.

Regarding the dopping of stones for dry sanding, we use the Elmer's Wood Glue. One thing we have found is that in order for the glue to stick to the stone, one has to remove the oil. One way to do this is to take the pre-ground perform and put it in a can and add dish soap, then add real hot water and let set for a few minutes, then wash off. Another way that is a bit quicker is to spray the top of the stone with Brake Cleaner. This is readily available where auto parts are sold. Wipe the back of the stones dry, then place a small amount of glue on the back of the stone. It is more convenient to do multiple stones at a time than to do singles. Use a piece of paper towel to wipe dry to make a seat for the dop-stick. Next place enough of the glue on the back of the stone for the dop-stick. For this you need to start with a new dowel rod cut to the proper length, and that the end is are perfectly flat. They should adhere good enough to pick up the stone, re-center if needed and set aside on a level surface to dry at least 24 hours. In cold weather, place over a lit lamp bulb to cure. Dry sanding heats the stone faster, so always sand the out side first and later as needed so the stone can expand outward. If this procedure is not used, you are susceptible to stone breakage.

(Editor's Note: While vacationing in Texas last month, we had the pleasure of meeting Bill & Helen Myers at

the Abilene Rock Show. He consented to write this article, on the way he polishes his cabs, getting a beautiful luster on them.)

The Glacial Drifter, Vol. 55, No. 4, May 2012

Dinosaur Feathers in Amber?

Feathers believed to be from dinosaurs have been found beautifully preserved in Alberta amber. The primitive, hair-like feathers known as protofeathers likely belonged to theropod dinosaurs similar to tiny Tyrannosaurus rexes that roamed the swampy forests of Alberta 70 million years ago, said Alexander P. Wolfe, a University of Alberta earth sciences professor who co-authored the research published Thursday in *Science.*

"Protofeathers aren't known from any modem, existing groups of birds and therefore the most obvious interpretation is that they belong to dinosaurs!" he said. Theropods, which are thought to be closely related to modern birds, were already known to have feathers, based on features surrounding fossils found in China. But a lot of details were lost in the fossilization process. "The feathers get altered, they get substituted by minerals and you can't see any of the detail!" Wolfe said. The protofeathers may look very hair-like, but the researchers confirmed they were feathers by looking at them under a microscope. Hair, found on mammals, has microscopic scales. Feathers, found in birds and dinosaurs, have features called nodes and internodes instead.

"With amber, it's different. We actually have the actual object.... we actually have this protofeather for the first time in the flesh." The feathers are preserved down to the pigments that show what colour they are and microscopic details of their structure. "Based on the fact that the protofeathers were just single filaments or clumps of filaments, just two centimetres long, the researchers concluded 'these had nothing to do with flight", Wolfe said. Instead, he believes they were used to keep the dinosaurs warm.

The protofeathers were among a wide range of feathers found in Alberta amber specimens by Ryan McKellar, a researcher who recently completed his PhD under Wolfe's supervision. McKellar's research was initially interested in insects, but stumbled upon some very bird-like feathers in the process of sorting through amber from the Royal Tyrell Museum and the University of Alberta's collection.

He decided to keep an eye out for other feathers. After sorting through around 4,000 chunks of amber, each less than two centimetres in diameter, he had collected a wide range, from the protofeathers to more complex feathers from the same time period that were most certainly from birds. Some were downy "like the kind you have in your pillow," Wolfe said. Others look like modem flight feathers. Some also had special features found in diving birds such as grebes. Wolfe, an expert in amber chemistry, said such birds likely shared the same ecosystem as the dinosaurs. A steamy, 'very buggy' coastal forest similar to Florida's everglades, dominated by cypress and cedar-like trees. The remains of the forest were compressed into coal deposits in Alberta where the amber samples were found.

Wolfe said now that the new research, including photographs, has been published, he hopes researchers in other parts of the world where feather dinosaur fossils have been found will start keeping an eye out for dinosaur feathers in amber. He also hopes to do a biochemical analysis on the proteins in the feathers.

(Article submitted by John Washburn. Published at htcp://www.cbc.ca/news/technology/ story/201 1/09/I5/sciencedinosatufeathcers..html. By Emily Chung. CBC News; via MWF News 12/11 & MMS Conglomerate March 2012.)

FAKE AMBER FOSSIL INCLUSIONS

The faking of inclusions of amber has been a major cottage industry since the earliest times. This perhaps reached its height in the early 1900's and a major source was from New Zealand. The North Island has some major deposits of Kaori Gum, and at the turn of the 19th century some was used to fake and imitate true amber. The digging of Kaori Gum was such a major industry the workers even had their own newspaper; `The Gum Diggers Gazette'. The Kaori Gum would be melted gently and suitable inclusions placed into the matrix, this was frequently some kind of colorful insect. Color is always a dead give-away of a bogus amber fossil. Truly ancient amber fossils have no color pigmentation left at all and are usually monotone. However, beetle color is often an effect of light refraction, i.e. the light being broken into its spectral elements, the resin however prevents this.

One of the most clever methods employed involves the use of a true piece of amber. The amber has a section cut from one end of the piece. A hole was then drilled into the main block. Inside this cavity was placed the animal which was in fact alive at the time of faking. The creature was then surrounded by molten resin and the previously sawn off section placed back in position and glued with the same liquid resin. The result is externally a perfect piece of amber which passed all tests for true amber.

Since copal can be easily melted, one of the most prevalent scams to watch out for today is the creation of "rare inclusions" by drilling a piece of amber or copal, placing the object in the hole and filling with molten copal. The surface is then ground and polished down to blend the side of the hole with the outer surface. Fakes made in this manner using lizards, exotic insects, etc., have sold for thousands of dollars to unsuspecting collectors! Use common sense. If you see something that appears too good to be true, then it probably is. Dishonest dealers have sold fake included copal and amber for thousands of dollars so do not let price alone, be your guide!

(Source: Pegmatite Bulletin, Jan., 2012; via http://NA-ww.paleodirect.com/fakeamberinclusionsl.htm & Conglomerate March 2012)
* Copal is not the fossilized, hardened resin that is known as amber; but rather an immature recent resin.

Here are some imposters and misnomers to look out for

Turquoise ribbons in a mottled tan "rhyolite" maxtrix (like material from the Royston Mine) is being sold as "Royston" or "Sleeping Beauty" turquoise. This material is being created in China and can be spotted two ways:
1) The dividing line between the "turquoise" and the matrix is indistinct
2) Under 10 power magnification you can see that the 'rhyolite" matrix is made up of cemented particles.
"**Cripple Creek Turquoise**" with gold veins running through it. This material is created in China from a turquoise powder (maybe plastic) and bronze wires.
Lapis with pyrite chunks and malachite with pyrite chucks. These are both created in China from ground lapis and ground pyrite (or malachite &pyrite) and bound together with resin.
Lapis and other opaque "crystals" that are cut to look like quartz crystals. **Howlite and magnesite** dyed to resemble turquoise, lapis, rhodonite, etc.

(The Pegmutile 3/1 1: excerpt from a Buyer Beware Post on LA Rocks & the Conglomerate March 2012).

Dendrites vs. Moss Agates: Orbicular Jasper vs. Polka Dot Agate

We are usually delighted, but not surprised to find inclusions in crystal, e.g. quartz of one color or another, rutile, sagenite and “stars”. The appearance of inclusions is obscured, our imagination takes hold.

Chalcedony (clear to cloudy), agates (clear but usually banded), and jasper (opaque) are all variations of silica oxides, with hardness between 6 and 7, which makes them very suitable for polishing. They may all have included material, and the nature of the inclusion is dictated by the composition of the host rock material and the manner of rock formation.

Dendritic chalcedony and moss agate are terms or names frequently applied to the same material. They are basically similar, but dendrites can form not only in chalcedony and agate, but also on limestone and soapstone and some sandstones. The dendrites form on a surface and are two-dimensional, like snowflakes or frost crystals on windowpane. If the rock is chalcedony, the dendrite forms on the surface, but more chalcedony may entomb it. The dendrites are usually earthy, black, brown, or reddish, but near Four Corners, in the eastern Mohave, near the junction of Hwy 58 & Hwy 395, rockhounds reputedly find blue.

The "mosses" of moss agate not organic material at all but chlorite or celadonite, are visible impurities in the agate. Scientists attempt to distinguish between the two by determining, if possible, whether the dendrite/moss or the material rock formed first. The moss forms while chalcedony is still gel like and can then form threedimensional shapes with the stone. Moss agate, also widely distributed, can be a variety or colors, green, black, white, yellow, red, orange, and tan. It is widely used in jewelry and polishes beautifully, if care is taken not to cut into and pluck the moss.

Multi-colored balls can appear in rhyolite flows. Rhyolite is a fine grained igneous rock, if it contains sufficient silica to take a brilliant polish. and is sometimes called jasper. Orbicular material usually appears as a mass of rhyolite that has silicate. As the rhyolite cools, sometimes excess silica starts to precipitate out of the magma, forming spherical balls. The ball shape is the form that are extremely concentrated silica (cristbalite) takes, as opposed to the crystal form in dilute concentrations. However, any material that by composition or consistencyis immiscible (not mixable) with the host magma will also form balls.

Regional metamorphism can also form orbicular jaspers. We hear names like Rainforest Jasper from Australia. Leopard Skin Jasper from Mexico, Poppy Jasper from California and Ocean Jasper from Madagascar. We may find one color surrounding another, or bands of balls, veils of lighter colors staining the background. Polka Dot Agate, from Oregon, has iron rich spheres floating in a snowy extremely fine-grained jasper, along with veils of golden brown. The material is so fine-grained it is almost cher-t and resembles porcelain.

The rock distinction of jasper and chert is: if it's attractive, it's jasper; if it's dull, it's chert. Some jasper represents replaced limestone or dolomite, some occurs as nodules, and sometimes it is part of the gangue of mineral deposits by hydrothermal or metasomatic processes.

Agates are translucent and usually banded, with sub-vitreous luster: jasper is opaque with a dull to pearly luster; to a Rockhound, jaspagate is a fine mixture of the beautiful oxides.

via Breccia, 09/08: via Rock Chip Reporter, 04/08; via Petroglyph, 06/03. via Calumet Gem. from The Tumbler 03/09 & the Pegatite Jan 2010 .

JUNIOR PAGE

MARION BRANDVOLD DISCOVERS THE BABY DINOSAURS

by Bill Griswold, SDMG member

A few years ago my wife Sharon and I had the good fortune to meet Marion Brandvold while we were sightseeing in Montana. Mrs. Brandvold is a proud, determined woman who made the most important paleontologic discovery of the last century - the bones of baby dinosaurs. She was born in the early 1900s and grew up in Montana. She started finding fossils at age 5 and told us that she loved to hike the Montana landscape hunting fossils, stopping only when snow covered the ground.
In 1977 she and her family found a site loaded with dinosaur bones. On one of their many trips to this site over the next year, she noticed that there were small bones of young, developing dinosaurs in what she thought was a fossil nest. Since adult dinosaur bones were found nearby and the babies were clearly advanced beyond the newly hatched stage, she and her family hypothesized that the parent dinosaur had been caring for the young while it grew in the nest - a hypothesisnow accepted by paleontologists worldwide.
A few months later, she loaned the bones to 2 other people who had grown up in Montana: John R. Homer, then a research assistant working at a Princeton museum and Bob Makela, a high school teacher. The bones were given the name of a new species, *Maiasaura peeblesorum,* by John Homer. The word *peeblesorum* was chosen because the bones were found on a private ranch owned by the Peebles family. *Maiasaura,* or "good mother lizard", was chosen to denote the maternal aspects of child-rearing manifested by these animals.
Mrs. Brandvold, who is now 97 years old, continued her work on dinosaur fossils in Montana until early this year when she had to retire and move to a nursing home. She and her family have started a research organization near the site of their discovery, called the Two Medicine Dinosaur Center. This center is located in Bynum, Montana, across the street from the T-Rex Agate Rock Shop which she started in 1937.
A **few years ago she asked for the return of the "loaned" baby dinosaur bones.** Although legal action was required to make it happen, the first bones of baby dinosaurs ever found are now on display in their center. *Maiasaura* is now the state fossil of Montana, and the Egg Mountain site she and her family discovered on the Peebles' ranch is considered one of the most important paleontological sites in the world.

We were able to take a wonderful tour of a new dinosaur excavation during our visit. You can learn more about the Two Medicine Dinosaur Center at their website: www.tmdinosaur.org.

MAIASAURS IN SPACE

The first dinosaur in space was *Maiasaura peeblesorum,* a duck-billed dinosaur. Astronaut Loren Acton packed pieces of bone from a baby *A4Uiasaura* and *a Maiasaura* eggshell in his luggage which traveled with him on an 8-day NASA mission in 1985 (Spacelab 2).
(Reference: dsc.discovery.com/dinosaurs/maiasaura-peeblesorum.html)

DINOSAURS IN SOUP

In 2007, a team of scientists from the Chinese Academy of Sciences was excavating several dinosaurs in Ruyang County in Henan Province, when they learned that local villagers had been digging up dinosaur bones for decades, grinding them up and adding them to soup. The calcium-rich bones, believed to be from flying dragons, were also added to traditional medicines, to relieve dizziness and leg cramps. Once the villagers learned the bones were from dinosaurs, they donated over 400 lbs. to the scientists, for research purposes. Cost of "flying dragon bones": 20 cents per pound.
(Reference: vuww.foxnews.com/story/0,2933,288044,00.html)

Source: The Pegmatite Nov 2009