



The Cutting Edge

Monthly Newsletter of the Ottawa Lapsmith and Mineral Club

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President's Message

March is the month in which we start looking around for a new workshop. Ideally, we are looking for 1000 ft2 for ~\$1800/month which is centrally located. The OLMC is an Ontario for profit corporation so we don't qualify for subsidized city locations.

We will have a long overdue corporate general meeting and an election of officers as soon as we are settled.

Our subtenant has renewed their insurance policy for another year. That is a good sign. We currently have \$70 K in the bank and lease debt of \$35 K on the books.

Some have suggested that we go back to our old Colonnade location. It was so expensive (~\$36 K/year) it almost bankrupted us. The game plan has always been to downsize and find a smaller, cheaper, more affordable location. That continues to be my game plan.

Kerry Day

OLMC President

Membership Report

At the end of 2022, we finished with 106 members (18 new people). As of February 3, 2023, we have 110 members. 35 are new members due to the Gem Show. I signed up 2 more new members at our meeting last week.

I want to say a **special thank you to Janet** from the Silversmith group. She made sure that everyone participating at the Zoom meeting had their membership renewed.

Nathalie Bourget, Membership Chair

All members are invited to submit articles, proposals, and thoughts that could be included in the newsletters. Also, feel free to send your Classified ads by e-mail to: news@olmc.ca

MIG Meeting

Date: March 20, 7:00 p.m.
Presenter: Jeffrey de Fourestier
Topic: Minerals of Autoroute 5 (Quebec)

OLMC members can join the Mineral Interest Group to get invites to meetings. Contact montgomeryjr50@gmail.com

Kawartha Rock & Fossil Club

presents

28th Peterborough Gem and Mineral show

Healthy Planet Centre

911 Monaghan Rd, Peterborough, ON

Saturday, March 4th & Sunday, March 5th

10:00 AM to 5:00 PM each day

http://kawartharockandfossilclub.com/?page_id=25

In-Person Meetings

Last week Bob Boisvert hosted our first in-person meeting in several years. 20 people attended, and it was a nice moment. Also, the room we had at the Community Center was great. It would be a good place for our next Christmas party, because there is a kitchen and a bathroom in the room. People were very happy to be there and to talk about stones. It was interactive, and we learned a lot of things about all the ultraviolet lamps and how to choose the right one for specific needs. **Thank you, Bob!**

The next meeting...

Is anyone interested in hosting a meeting? Contact Nathalie, memberchair@olmc.ca

Topics of interest and activities might be:

gem identification, rock swap, silversmith group show & tell, faceting, carving, just talk about stone

Save the Date: Geoheritage Day 2023

It is the 15th annual Geoheritage Day this year, and it is the 70th anniversary of the Carleton University Department of Earth Sciences! They are planning activities and celebrations on the weekend of September 23-24, 2023. You are warmly invited.

September 23rd, 10:00 am – 3:00 pm, Geoheritage Day:

Visit exceptional geological sites in parks and green spaces of the Ottawa – Gatineau area. The sites will be hosted from 10:00 am – 3:00 pm. Activities hosted on campus include a Department of Earth Sciences Tour & Campus Geoheritage Sites.

September 24th, 10:00 am – 12:00 noon, Downtown Walking Tour:

Alumni Walking Tour of Dimension (Building) Stones in Downtown Ottawa, starting at the Parliament Buildings, led by Quentin Gall. Limited capacity, registration will be required.

<https://geoheritageday.carleton.ca/> Registration will open in May - <https://earthsci.carleton.ca/>

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Chicago museum got a real Bronze Age sword

The Field Museum in Chicago recently found they got a real 3,000-year-old Bronze Age sword from Hungary instead of a fake one.

The sword had been found in the 1930s in the Danube River in Budapest, Hungary. The museum curator thinks the sword was probably mis-labeled at the time.

While the museum was preparing for its special exhibition "[First Kings of Europe](#)", visiting Hungarian archaeologists asked to analyze the sword with an X-ray fluorescence detector to compare its chemical composition to other known Bronze Age swords. They found a nearly identical content of bronze, copper, and tin.

The sword will be on display in the Field Museum's main hall as a preview for the new exhibition.

<https://www.fieldmuseum.org/about/press/authentic-3000-year-old-bronze-age-sword-put-display-field-museum>

Jewellery of Chaos

A team of Italian scientists used a computer to create shapes from a simulation of a mathematical model using chaotic attractors. The resulting image was sent to a 3D printer to make a mold out of resin. Then the mold was sent to a goldsmith to make the final metal object.

In this scientific paper, the mathematicians explain the models, how they were used for design, and how those designs were produced in a real facility.

Their goal is to show how science can be used to create art, which they hope will encourage more people to learn about science.

<https://aip.scitation.org/doi/10.1063/5.0130029>



*These chaotic shapes were printed in bronze.
Photo from F. Bertacchini/P.S. Pantano/E.
Bilotta via arstechnica.com*

Ancient Obsidian Tool Factory Found In Ethiopia

Researchers at excavation sites in the Awash valley in Ethiopia, uncovered a layer of sediment containing a cache of 578 stone tools dating back to 1.2 million years ago (Early Pleistocene). All but three of the tools were made from obsidian, and appear to be of a standardized axe shape.

The scientists say they do not know which species of human made these tools, but there are signs of "secondary retouches" and "regularization" of the pieces.

So-called 'knapping workshops' had been recorded only in the second half of the Stone Age (Middle Pleistocene) and only in Europe.

Obsidian is a delicate material that can have razor-sharp edges.

The repetitive use of mastered skills at such an early stage in human history shows a cognitive leap and creative problem-solving.

<https://www.nature.com/articles/s41559-022-01970-1>

<http://www.melkakunture.it/>



Stone Intarsia



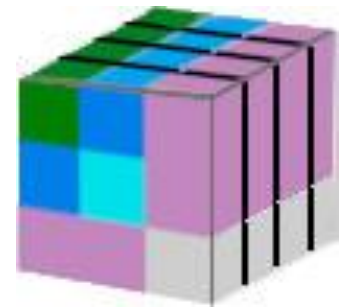
Intarsia is an art form like mosaics, where small pieces of material are cut, polished, and glued together to make a design. It is different from “pietra dura”, which uses tightly fitted pieces to create images. Colourful, uniquely patterned table tops and boxes are one use for this technique, as well as jewellery.

Selecting Stones

There are no firm guidelines for selecting the stones to use. Material of complementary or contrasting colours could be used, or ones with patterns that line up. Found that fit together without much effort, and pieces that are roughly the same thickness will save on grinding time. Stones of different hardness will be a challenge to polish evenly. Sometimes natural defects and rough spots can add some aesthetic value to the finished piece.

The Choice of Design

Geometric shapes and free forms are all possible. The choice of colours and shapes and patterns is entirely up to the artist: a square of picture jasper surrounded by a mono-coloured jasper; the straight lines from edges of a slab of tigerseye combined with triangles of turquoise and lapis, an L-shaped piece of dark stone with a wedge of nephrite or rhodochrosite; alternating bands of rhodonite, amazonite and white quartz.



Bars can be combined into a larger piece to be sliced, providing equally sized pieces of the same design

The Right Adhesive

The most important principle is to have a seamless transition between the different pieces. There should be no gaps, and there should be no discoloration from the adhesive. So, you need the right adhesive that will provide a strong grip, but it also must be flexible enough to survive vibrations from grinding, and it must be waterproof.

Grinding and Polishing – Getting a Good Fit

A vertical or horizontal flat lap machine is required. Ideally, the operator has a barrier (fence) against which the stone can rest while the wheel grinds a consistent 90-degree cut on each piece. Check the pieces for proper fit.

Trace the future cabochon shape on the surface at this time. Glue the pieces together with epoxy. Some people put a thin piece of metal between the pieces, which may have some aesthetic value, especially when using pieces of similar colours. One additional step that will add more stability when grinding is to epoxy all of this to a thin slab for a back plate. Be careful that the pieces do not slide apart. A vise or small clamp is helpful.

Once the epoxy is cured, use a saw to cut away the excess stone. Grind the outside edge to match the traced shape. Some people find it easier to use a dop stick for the grinding process. Keep a light touch and a lot of water to so the piece does not overheat and melt the glue or cause the stones to crack. It is recommended to grind the harder stone first.

If metal was inserted between the pieces, make sure the metal does not touch the wheel much because it will heat up very quickly; the glue around it may melt and the metal can slip out.

After the edge is done, the doming process for the cabochon can be done, if desired.

Home Studio Setup



What is a necessity?
What is nice to have?

Takeaways from the Silversmith group meeting 2022-01-19

Budget

\$200, includes \$160 for products from Gesswein's on-line shop, plus some extras

Where to place your studio

You do not need a fancy spot. You do not need a lot of space. A kitchen table is adequate, or a small jeweller's bench. It is nice to be close to a water source and an electrical power source for lighting, but water can be in a container, and there are extension power cords.

Basic Set Up



The Basic Set Up

1. a pickle container that is resistant to acid, like a ceramic coffee cop on a mug warmer
2. copper tongs -- buy them or make your own out of copper sheet
3. basic handheld butane torch from Princess Auto. They go on sale often. They can be re-filled, and they are easy to light.
4. heat-resistant (1500 C) surface for soldering, like a ceramic soldering board or kiln shelf, kiln brick or fire brick
5. tripod and screen nice to have for soldering and heating from underneath
6. a container for quenching, like a mason jar or pyrex measuring cup
7. cross-lock tweezers with insulated handles for picking up hot things. They can get bent over time, but they are easy to repair.
8. soldering pick for picking up solder to apply and position solder
9. all-purpose shears to cut metal and solder (\$1.25 at Dollar Tree)
10. a fire-proof/heat-proof surface, like a baking sheet. A baking sheet also comes with a lip that prevents things from rolling away



Nice-to-Have Extras

1. small crock pot from a thrift store. Just remember to turn it off and clean it once in a while.
2. charcoal block or large piece of compressed charcoal for soldering work. You can use it as a mould for molten metal by carving shapes into it.
3. honeycomb soldering board with ceramic pins
4. "third hand" stand is a nice-to-have to hold tweezers and free up your hands for other work

Géoparc de Percé

Percé UNESCO Global Geopark is located on the eastern most tip of the Gaspé Peninsula, east of Québec City. Access is free to 18 km of trails leading to 23 listed geosites within the 555 km² park, including benches to take a rest and lookout platforms with panoramic views.

The area features two distinct environments: terrestrial and marine. The terrestrial environment includes the rolling hills and dense boreal forest of the Notre Dame Mountains, the northern part of the Appalachian Mountain range. These geological formations were created during the Paleozoic, between the Cambrian and the Carboniferous (542 to 300 million years) by volcanic, tectonic and glacial action.



Géoparc de Percé on the Gaspé Peninsula; Google Maps

The marine environment encompasses several diverse ecosystems. Parc national de l'Île-Bonaventure contains a large migratory bird sanctuary, including a notable Northern Gannet colony. The Marine Mammal Research Group has listed 13 species of whales present in the Gulf of St. Lawrence. Large numbers of seals use the many rock outcroppings at the high tide line as a resting area. The coastal cliffs are exposed to bad weather and strong sea currents and waves at certain times of the year. There is considerable wind. Winter ice has protected the coast from storm surges in the past, but recent reduced ice levels means greater exposure.

Percé and the Gaspé Peninsula have historical significance. Sir William Logan, the first director of the Geological Survey of Canada, started the geological mapping of Canada here.

Some of the notable geological sites are:



and Forillon Park on the horizon.

La Crevasse (left) shows the effects of erosion on the conglomerate rock of the Bonaventure Formation. The viewing platforms offer terrific views of Pointe St-Pierre, Pointe de Forillon, and the formations of the Canne-de basin.

There is a short **zipline**. From the site of the suspended glass platform 100 m up (Mont Sainte-Anne trail), glide down 230 meters to the first belvedere site while taking in views of the Gulf of St. Lawrence, Rocher Percé, Bonaventure Island,

Will you dare look into the **Bottomless Hole**? This underground cavity is near the start of the Sources trail. It is formed almost exclusively from pieces of marine limestone from older rock.



At the top of Mont Sainte-Anne is **Roland's Table** with a great view of the Percé landscape. This rock formation is a landmark for sailors, and people erected a statue of Sainte-Anne, the patron saint of fishermen.

At the intersection of rue de l'église and rue Sainte-Anne is the **Church of Percé** (left), combining geology and culture. Built in 1903, the main construction material is red-brown sandstone from the Cannes-de-Roches quarry, near the center of the Geopark.

Photos: from Géoparc de Percé <https://geoparcdeperce.com/>



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L'équipe SilviaFindings



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Nuggets

Spinel ($MgAl_2O_4$) is a member of the larger spinel group of minerals. It has a cubic crystal lattice, and commonly forms twinned octahedra.

Spinel is found in metamorphosed limestones and silica-poor mudstones. Rarely it is found in igneous rocks with a lot of aluminum, forming corundum or spinel if there is enough magnesium.

It can be colorless, but usually it is shades of red, lavender, blue, green, brown, black, or yellow.



Buffalo Geological Society presents...
53rd Annual Gem, Mineral & Fossil Show
March 18-19, The Fairgrounds, Hamburg, New York
www.bgsny.org

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Workshop Schedule						
March 2023						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 	2	3	4 Peterborough Show
5 Peterborough Show	6	7 Silversmiths Meeting 7:00 p.m	8	9 	10 Toronto Gem Expo	11 Toronto Gem Expo
12 Toronto Gem Expo	13	14	15 Day 74	16	17 	18 Buffalo Gem Show
19 Buffalo Gem Show	20 MIG Meeting 7:00 p.m.	21 Silversmiths Meeting 7:00 p.m	22	23	24	25 
26	27	28	29	30	31	1 Paris Gem Show



OLMC Membership Application

New Membership

Membership Renewal

Individual **\$20**

Family (2+ persons in the same residence) **\$30**

Benefits:

Monthly Newsletter

Newsletter advertisement: \$25 per year for members or \$55 for businesses
(Ten quarter pages per year over ten newsletters).

Silversmith online meeting 2/month

Mineral Interest Group online monthly meeting

OLMC online auctions

OLMC field trips

More information can be found at <http://www.olmc.ca>
You can also go on our Facebook page: [OttawaLapsmithandmineralclub](https://www.facebook.com/OttawaLapsmithandmineralclub)

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Please note that all membership information is used only for administrative purposes.

Administration use only

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Supervisor signed: Yes No

Date: _____