

Kitchener Rock Walk 2016

Start at the Kitchener Public Library at Queen Street entrance.

Kitchener Public Library



The interior of the library has Eramosa Dolostone floors and around the elevators. This is local dolostone from the Warton area. It is thinly bedded and polishes well.

Outside the library along Queen Street you will see a wall of natural sandstone with tones from cream to dark brown. The colour is from its iron content. I'm not sure where this sandstone is from, it makes a rather interesting effect with the concrete panels along the side of the building. Polished black anorthosite "black granite" is used along the Queen Street side and as a hammered finish on benches.



Gaol House, Governor's Residence

This building was originally the governor's residence of the gaol. It is located behind the Court House and it is made of yellow brick. The bricks are yellow because they were made from local glacial till and the glacial clay in this area has a lot of calcium in it.

A number of years ago the bricks were painted red. The bricks have been cleaned to their original yellow colour. The yellow bricks are softer than the red bricks which are used around Kitchener/ Waterloo and other parts of Southern Ontario.



Behind the Governor's house is the Gaol made of field stone. If you look closely at the walls you can see that it is built of different kinds of rocks. You can find granite, gneiss and various other rocks.





Black anorthosite “black granite” polished bench celebrating the townships which make up Waterloo County.

Waterloo County Gaol House Garden. In the middle is a feature filled with river rock of granite and an anorthosite.



The Old Courthouse Building, Weber Street.

The courthouse has two textures of rock chips decorating the outside wall. The white wall is quartz and marble chips and the grey wall at the bottom is grey gneiss, white quartz and a black metamorphic rock. Terrazzo flooring is beautiful in this building. To make this kind of flooring they took white and black chips of marble, mixed it with concrete and then smoothed and polished the surface. Pebbles add interest near the entrance.



St. Peter's Lutheran Church

At the base of the Church we can see different kinds of metamorphic rock called gneiss. The rock has a natural fracture in it that allows it to break into thin sheets of decorative stone. There are various colours: the red rocks are mainly feldspar and the black is mainly biotite mica. Occasionally, you may also find red garnets in this rock. If you look closely and have a bit of luck you may find some!

Look up at the side of the church. As you can see in the photo, there is St. Peter carved out of limestone. If you look just below his hand on the right hand side, you will see a squiggly line which has weathered out. There is another one across the goblet. These lines are called stylolites. They wiggle up and down and were formed from chemical dissolution, a process that reduces the volume of the rock. Soluble clay may fill the serrated surface. Stylolites are common in limestone.



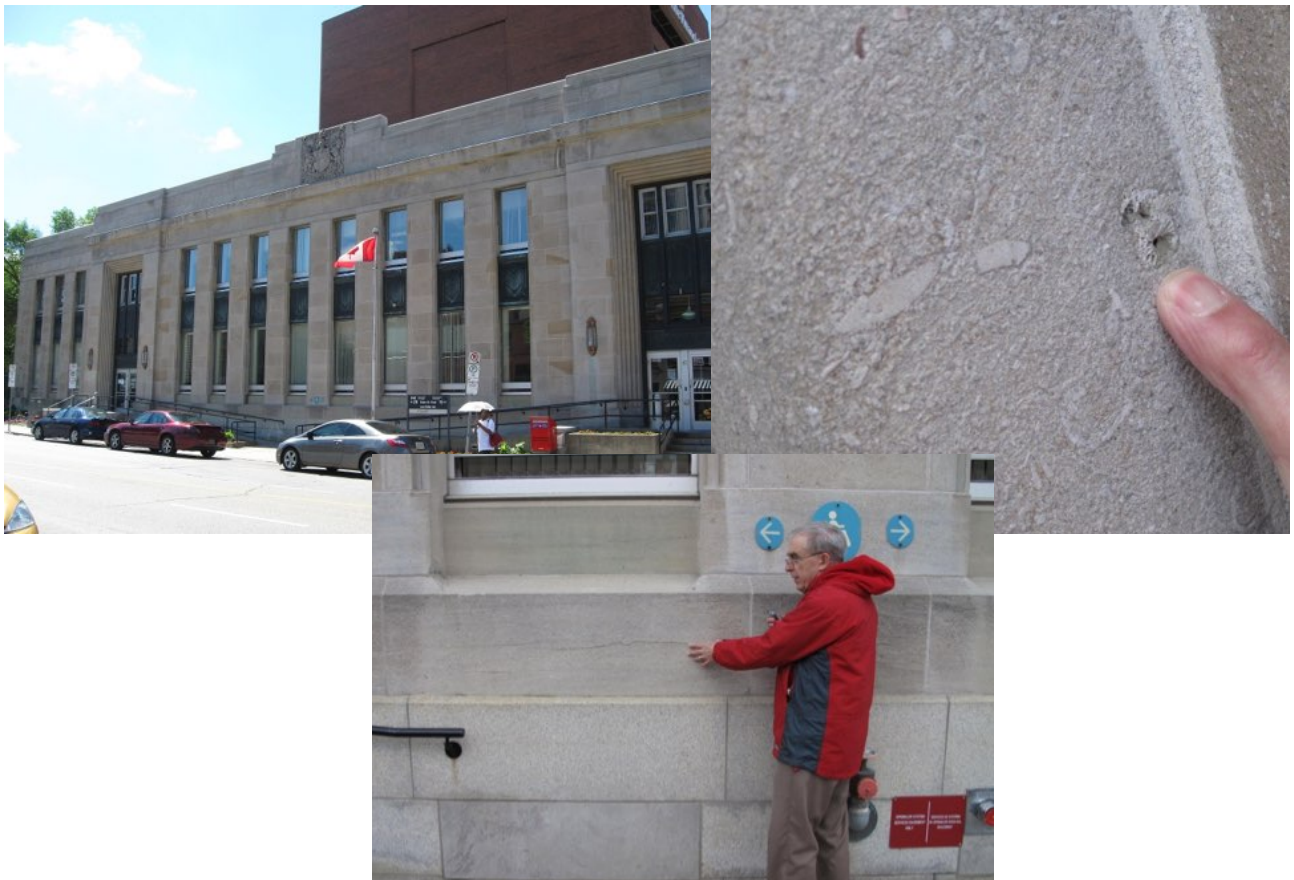
Waterloo Regional Courthouse

Some walls are decorative concrete; others are grey and beige Silurian Eramosa Dolostone from Warton, Ontario. Look closely at the thin layers of lime mud which were deposited in tropical seas 443 - 419 million years ago. Giant scorpions lived in the shallow sea. Blocks of porcelaneous limestone of the Ordovician Lindsay Formation (485.4 and 443.8 million years ago) are used in the gardens around the building. Look closely at the fine-grained smooth surface and the stylolites on some of the weathered surfaces of the rocks.



Immigration Canada

The Immigration Canada Building is clad with grey granite at the bottom and Indiana limestone of Mississippian age (360-320 million years old) which is found between Bloomington and Bedford, Indiana. Rail transportation allowed the rock to be used all over North America. If you look just to the left of the door you will see squiggly lines in the rock below the window. On the right hand side of the door you are able to see corals in the rock. You can see them vertically from the top and as cross sections. You will also see bryozoans, which look like little twigs on the surface. Around the doorway they've added some brownish looking limestone to make a colour effect. It's coarser material with broken up crinoids and shell fragments in it (it is a beach deposit). Look down and you will see that the granite and the limestone are becoming weathered by the salt that is put down in the winter time.





16-20 Queen Street North

Sandstone columns and elegantly carved doorway. Sandstone resists salt damage.



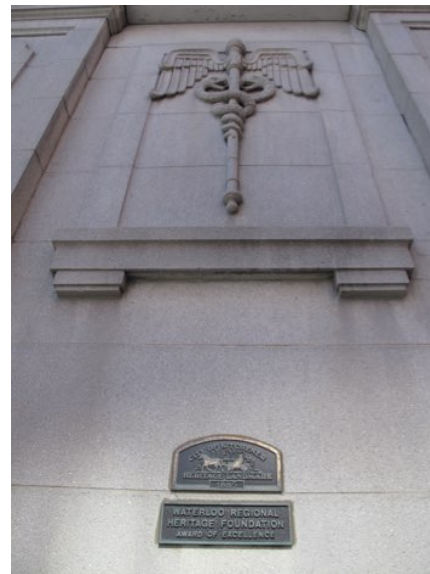
CIBC Bank on the corner of King and Queen.

The exterior walls are moulded concrete. Look closely and you will see angular fragments of limestone. Inside the CIBC building the floor is terrazzo. We also have some granite near the door. There are a few spots where you can see extra large crystals of feldspar and other dark minerals in the rock.

Exit the bank and continue along King Street to the Benton Centre and Speaker's Corner on Frederick Street.

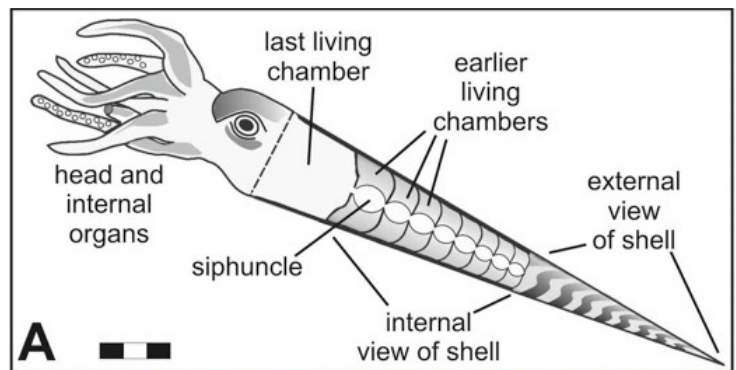
Benton Building

At the Centre for Mental Health, the Benton Building, view the Tyndall Stone, a dolostone from the Ordovician Red River formation, Garson, Manitoba. Both ends of the Benton Building are covered with this stone. It is used as the decorative stone in the interior of the parliament buildings in Ottawa. Tyndall stone is also known as tapestry stone; the pattern formed by shrimps that lived in small tunnels in the lime mud seabed, altering the chemistry of the material and making this pretty pattern in the rock.





Cone-shaped Nautilus fossils have chambers which were air-filled when they were living.



Rock underneath the Tyndall stone is anorthosite. This plutonic rock is mainly made up of a feldspar called anorthite.



Speaker's Corner

The black polished rock here and used to make seats along King Street is a fine grained black rock. Volcanoes erupting this rock are found on Hawaii.



Crabby Joes at the corner of Fredrick and King Street.

You may notice that we're once again looking at Indiana limestone. This building has been around long enough for the fossils to start to weather out. Look down in between the windows and the rock below the limestone is serpentine. Serpentine is metamorphosed peridotite which has turned into a beautiful decorative stone with green olivine and white calcite. Oceanic crust and uppermost mantle from ocean basins containing ultramafic rocks have abundant **serpentine**. The rocks near Asbestos, Quebec are formed in this way and also have asbestos in them. This decorative stone is not hazardous!

Kitchener Cenotaph, Frederick Street.

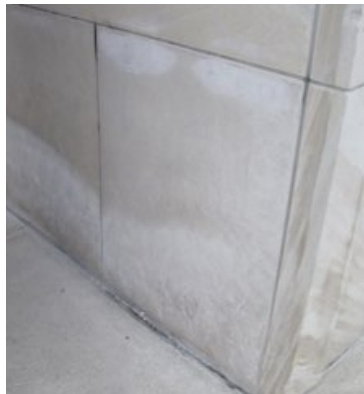
This rock is a granite. It looks like *Rock of Age's Granite* from Vermont. Similar granite is from nearby Stanstead, Quebec. If you look closely in some places you may notice inclusions in the rock which are weathering a little bit faster than other sections. The inclusions may appear slightly brownish. Also notice that the lettering, which is bronze, weathers and forms a green copper stain on the surface.





The Registry theatre is just east the intersection of Weber on Frederick Street.

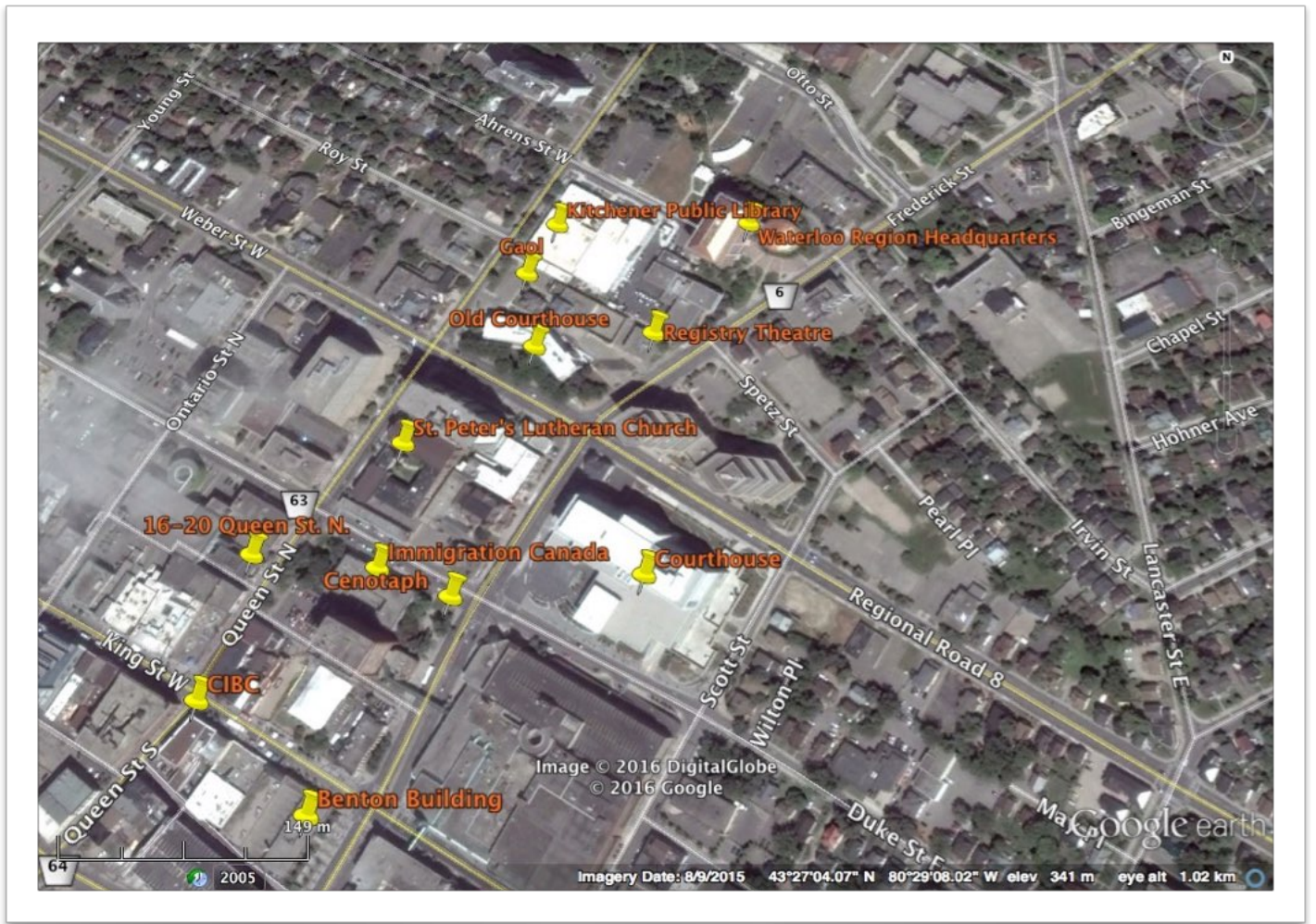
Have a look around the front door. You will find it's made out of Indiana Limestone, of Mississippian age (358.9 to 323.2 million years ago). If you look closely at the stone around the door you will see fossils in the rock as well as where rain and chemical weathering occur (from sprinkling salt in the wintertime). If you look at the rock from its side you can see the weathering goes straight up and down showing the original bedding in the rock. If you ever get the chance to visit inside the building, there is beautiful terrazzo work with marble on the steps.



Regional Municipality of Waterloo Building

In front of the building you will see glacial erratics in the rock garden. Check out the different kinds of gneisses, granites, and other rocks in the decorative garden. Look down as you're walking and see the concrete and granite tiles (the pink) in front of the main entrance. Look up and all around the main door and you'll see some of these patterns are the shape of channels in the lime mud as this deposit formed. Salt damage is at the front door. Enter the building and enjoy the polished marble.

At the rear of the building as you return to the Library, note more salt damage!



Google Earth Map of the places we will visit for Jane's Walk May 6th 2016

More stops will be included in the future.

Visit the Earth Sciences Museum at the University of Waterloo
Dinosaurs, rocks, minerals and more!

<https://uwaterloo.ca/earth-sciences-museum/>

Letter	Name	Location	Letter	Name	Location
A	Laurentian Bank	10 Duke St W	K	Scotia Bank	64 King St W
B	St. Peter's Lutheran Church	49 Queen St N	L	City Hall	200 King St W
C	Courthouse Building	20 Weber St E	M	Dallas Club	312 King St W
D	Gaol House Building	73 Queen St N	N	TD Canada Trust 2	381 King St W
E	Registry Theatre	122 Frederick St	O	Kaufman Lofts	410 King St W
F	Region Building	150 Frederick St	P	Pharmacy Building	751 King St W
G	Immigration Canada	30 Duke St W	Q	Church of Christ Sciences	64 Water St N
H	Crabby Joe's	70 King St E	R	St. Jerome College	120 Duke St. W
I	Benton Centre	90 Benton St	S	St Mary's Church	56 Duke St W
J	CIBC Bank	1 King St			