

Kitchener Rockabout by Peter Russell

Start at the parking lot on Gibb Street, it's \$3 for four hours

Laurentian Bank



Let's begin at the corner of Duke and Queen, at the Laurentian bank. If we look at the base of the bank we can see that the rock is made up of Indiana Limestone. We can also see that it is full of fossils. You can probably see fossils which resemble cheerio's in the rock as well as long stems. These belong to an animal called a crinoid.

Originally the rock had a smooth surface, but since the building was built the surface has been etched away by the weather and the fossils have appeared on the limestone surface.



Please take a left on Queen Street from Duke. Walk up Queen Street, to St. Peters Lutheran Church.

St. Peters Lutheran Church





At the base of the Church we can see different kinds of gneisses. The rock has a natural fracture in it that allows it to break evenly into thin sheets of material. There are various colours: the red rocks are mainly feldspar and the black is mainly biotite Mica. Occasionally you can also find 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 the face of Jesus carved out of the rock. If you look to the side of the carving, just below his hand on the right hand side, you will see a squiggly line that has weathered out. There is another one across the goblet. These lines are called stylolites. They wiggle up and down and they were formed from a kind of interaction with the sediment as it was hardening up. They look like ancient writing. The lines are common in limestone.



Walk up Queen Street, past Weber, and on your right hand side will be the courthouse building.

The Courthouse Building



The courthouse building has terrazzo flooring. To make this kind of flooring they took pieces of different coloured of marble, mixed it with concrete and then smoothed the surface. In this building the flooring has added a rather nice decorative effect. The marble makes a raised pattern in the terrazzo floor. Don't get caught taking pictures inside the court house building...



Keep moving up Queen and turn right when you see the yellow brick building.

Jail House Building and Governors Residence



This building was originally the governor's residence of the jail. 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 till in this area has a lot of calcium in it.

A number of years ago the buildings bricks were painted red but they have since cleaned the bricks up to their original yellow colour. The yellow bricks are softer than the natural red bricks that are used around Kitchener/ Waterloo and other parts of Southern Ontario. They sometimes make bricks out of this yellow clay and then add iron oxide to make them red, but this building was built before that time.





Behind the Governor's house is the jail. If you look closely at the walls you can see all of the different kinds of rocks that that were used. All of the rocks were found in fields nearby.

You can find granite, gneiss and various other things. We'll check out a couple as we walk by.

Walk behind the yellow building and view the front of the jail.

If you look closely at the rocks you can see dolostone, gneiss, pieces of quartzite and things like that. Have a look at the different types and the variety of materials that were brought in by the glaciers. The rocks were collected, broken to make a flat surface at the front, and then used to decorate the building.



When you walk towards the library you will see a black polished bench behind the jail.

Behind the jail there is a chair made out of anorthosite (a very hard granite-like material). The bench has the different parts of the region noted on the sides of the seat.



Just behind the seat there's a garden. In the middle of the garden they have installed a stone feature which is made out of granite and a dark stone.

On the left side of the yellow-brick building there's a pathway leading to the library.



Go back along Queen Street to the Kitchener public library. You will see a wall with natural sandstone broken into blocks.

I'm not sure where this sandstone is from, but it makes a rather interesting effect with the concrete, making panels along the side of the building.



Walk through the parking lot of the Kitchener library and the police station and make a quick right onto Fredrick Street.

Registry Theatre



The Registry theatre is located beside the courthouse. Have a look at the front door; it is made out of Indiana Limestone. Have a close look at the rock around the door as well. You should notice two things: the rock contains fossils; and the stone has been weathered. Wind, rain and chemical weathering (from

sprinkling salt in the wintertime) are very strong weathering agents. If you look at the rock from its side then you can see the weathering goes straight up and down from the bedding in the rock.

If you ever get the chance to visit inside the building, there is some beautiful terrazzo work with marble on the steps going up inside. Normally, you would have to come for a special event in this building.

Please walk back down Fredrick Street, back the way you came.

Region Building



We are now at the Regional Municipality of Waterloo Headquarters, just a bit down Fredrick Street.



In front of the building you may see some glacial erratics in the rock garden. Please check out the different kinds of gneisses, granites, and other rocks which are in this decorative area.



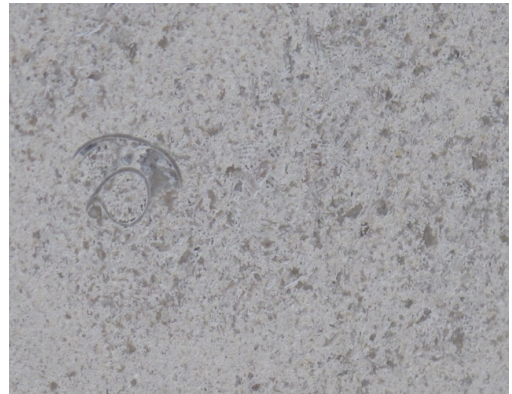
Walk up to the main entrance of the building. Look down as you're walking and admire the concrete and granite tiles (the pink) in front of the major entrance to the main building.

Look up and all around the main door and you'll see limestone. The limestone has interesting patterns in it.

The salt which is sprinkled in the wintertime is a very powerful weathering agent. The doorway around the building is suffering from a great deal of salt damage. Evidence includes the whitish material on either side of the door and also how the sharpness of the rock gets worse as you go down to where the salt erodes the rock.

Have a close look at this rock. You can find fossils in it. This rock was put here only a few years ago so you can still feel its nice smooth surface. This rock is a similar material to the rock outside the Laurentian bank. It just needs a little bit of time to get all the fossils to appear on the surface.

Walk back the way you came: past the police station and the registry theatre. Cross Weber Street and keep going. Before you pass Duke Street you will notice a monument.



The Monument

If you look closely at it you will notice that this rock is a granite. It looks like *Rock of Age's Granite* from Vermont. It is a grey granite and 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 stain on the surface.

Keep walking along Weber Street. You will pass Duke Street and on your right will be the immigration building.





Immigration Canada

The Immigration Canada Building has granite at the bottom and Indiana limestone further up. If you look closely at the granite you will notice further evidence of weathering processes on the rocks. You may also notice the stylolite texture. If you look just to the left of the entrance way you will see squiggly lines in the rock underneath the window, and that is another stylolite.



(Left) Evidence of salt damage.



On the right hand side of the door we are able to see corals in the rock. You can see them vertically from the top and as cross sections. You can 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 a coarser material with broken up crinoids and other things in it (it's like a beach deposit).

If you walk along a little bit where the handicap walkway is, right in front of you there are sprinkler systems on the wall and just a bit to your left you will see more stylolites.



Please walk back to Fredrick Street and continue down until you get to King Street.

Across Fredrick Street is Stantec, which is made up of large pieces of limestone from the Bruce Peninsula. This stone has been used as a decorative stone around the entrance to Market Square.

***Stantec* →**



Crabby Joes

Check out 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 you can see there's also some serpentine marble. This is metamorphosed limestone that has turned into a beautiful decorative stone with green olivine and white calcite.



Cross King Street at Fredrick Street and turn right down King Street.

Benton Centre



At the Centre for Mental Health, the Benton Building, go to the sign and look at the Tyndall stone. Tyndall stone is a decorative stone from Manitoba. It has lots of fossils in it and is also used for decoration in the parliament buildings in Ottawa.

This is a close up view of the tyndall stone. It's also known as tapestry stone. The darker layers were formed by shrimps that lived on the seabed. They dug little tunnels in the sediment and



pooped along the way, altering the chemistry of the material and making this pretty pattern in the rock. Please look around for fossil corals and other things in the rock.

The fossil to the left which looks like a CD with a pattern on the surface on it is called a receptaculites. This is a typical fossil from the times when the tyndall stone was formed.

Also look near the brown door. About 2m off the ground there are two Rugose Corals (single corals) together with all kinds of broken up material around them.



The Rock underneath the tyndall stone is a kind of Syenite/ anorthosite rock. The rock is mainly made up of feldspar. There is no quartz in this rock, unlike granite. It seems to have held up pretty nicely, even with our weather. The only damage is a cracked a corner which looks like it was bashed up by a kind of equipment at some time or other.

Head down King Street towards Waterloo and right before you cross Queen Street look for the CIBC.

CIBC Bank



Go inside the CIBC building and notice the terrazzo flooring. You can also see some granite pieces near the door which are fairly even in colour. There are a few spots where you can see extra large xenoliths of feldspar and other dark minerals in the rock.

As you leave the CIBC, turn left, cross Queen Street, then cross King Street. Continue down King until you get to the Scotia Bank on Ontario Street

Scotia Bank



Please look closely at the building as it is made up of several kinds of rock.

The building is has Serpentine marble, white marble with grey stripes (on either side of the door) and Indiana limestone (with the symbols of the Scotia Bank and the sign on its surface).

The combination of all these rocks makes the building look truly unique.

Cross King Street to the Canada Trust.

Canada Trust

If you look closely at this building then you may notice that it's made of two different kinds of granite.



There are also accent pieces along the base of the wall which have labradorite feldspar in it.

The labradorite feldspar picks up the sun and you get a blue flash from it. Notice how they've treated the grey granite. Some of it has been polished while some of it has been beaten to a matte finish.



Head inside the Foyer of the Canada Trust.

Inside the foyer of the building you will see different coloured granites. There is red granite, grey granite and black granite made into a beautiful terrazzo pattern on the floor.

On the way to City Hall: Cross King Street and keep going towards Waterloo/ down to the City Hall. Before you get to City Hall you will see a nice open space and Casablanca books.



Open Space

In the open space you will see some pieces of limestone from down near Woodstock. There are lots of fossils of Rugose corals (single corals) in the rock. You may notice that the larger fossils resemble an ice cream cone if they're cut in the right direction. Occasionally you may find other types of fossils in here too.



Casablanca Books

Right beside the open space is Casablanca Books. If you look at the walls of this building you will see gneiss which has been cut into thin slices decorates the front of the building.



Continue on your way to City Hall

City Hall

The red sandstone that makes up the walls of City Hall was shipped in because it was cheaper than other local building rocks. There was a lot of fighting about whether we should have used an Ontario stone instead of stone from India but this sandstone has served well in Canada's cold temperatures and doesn't seem to be failing.



Look at the steps going up to City Hall and also in the front of the building. You will see some anorthosite, a kind of Syenite rock which doesn't have any quartz in it. The steps have been left unpolished but inside the building they have some polished material.



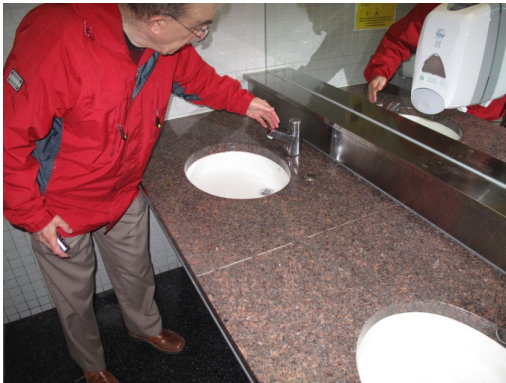


Head inside City Hall and check out the foyer

The floor in the building is made from the same anorthosite as outside but some sections have a polished finish while other sections have a rough finish. This is what makes the stripes on the floor.



Near the entrance we also have a different rock type. This rock is more of a darker metamorphic rock, but it is still a type of granite. This building has quite an interesting use of colours.



Don't forget to check out the bathrooms! The counters are made of granite the bathroom sinks.

Head out of City Hall and turn Right on King Street. Cross College Street, then Water Street, and continue to Dallas night club.



Look at the marble along the sides of the door at Dallas. This marble was porous so they had to pour concrete in all the little holes. The concrete is brownish looking (like the piece that the finger is pointing to in the image). Iron is responsible for the reddish colour, and calcite is responsible for the white colour.



This is also a good spot to check out the terrazzo floor. At the entrance way you can see the different colours that were used to make the terrazzo. Terrazzo was very popular up until the 1960's when it began to be used less and less in buildings.



Keep heading down King Street. You're going to want to cross and check out the TD bank before Francis Street.

TD Bank

Stop at the TD Bank and look at the different ways that you can treat the granite on the outside of a building. The rock is shiny and polished in some places and matte in others. The TD bank logo was also put into the rock by grinding off the surface and adding polish.



Go inside the front door and admire the marble on the walls as well as granite underneath your feet. If you look closely at the marble on the walls you can probably see cracks. The cracks were filled with calcite crystals, forming little layers which look a little bit like an agate. This marble comes from Italy.



Take a look at the polished granite on the floor. You may be able to see phenocrysts (large crystals of feldspar). Some of these crystals are 3cm long; others are 6 or 7cm long.

As you leave the TD bank stay on the west side of King Street and head towards Victoria Street. Our next stop is the Kaufman Rover Company Lofts

Kaufman Lofts



This is another building that has been decorated with Indiana limestone. You can see some cross bedding structures, caused by the layers forming one on top of another in the sea. The building has been here since the 1920's.

When you get to Victoria, Cross the Street and look to your left at the Pharmacy building.

Pharmacy Building



Look up at the Pharmacy Building. There is a yellowish rock with a rather rough-looking surface on it. This is the bottom of the Emanosa Dolostone, which is found up near Warton. This dolostone makes up

the bumpy rough surface on the rock. If you look closely at the rock, where they've ground it smooth, you can see flat layering.



Head inside to check out the rocks in there.



Inside the building the staircase is made of polished Emarosa Dolostone. You will notice that there is terrazzo as well as Eramosa dolostone on the floors in the hallways.



Take a close look at the flooring. When you're finished terrazzo it shouldn't be wavy on the surface, it should have a flat surface. They didn't do too good a job.



They've also used copper on this building which has added a nice effect.



Head north on Victoria Street and when you get to Duke Street (It's quite a hike) make a right and head up Duke Street. Keep going up Duke Street until you get to Water Street, take a left on Water Street and stay on the right side. The fourth or fifth building will be the First Church of Christ Sciences.

First Church of Christ Sciences

Have a look at the walls of the building. It looks as if they've taken a big truckload of rocks and piled one on top of another. We have quite a variety of rocks in here.

They've made this building look like the rocks don't have any visible means of support. All the cement is at the back and they've just left the fresh outside surface of the rock to view.



There are pieces of granite, gneiss and pegmatite (same composition as granite but with big feldspar crystals up to about 10cm across in the rock)...



There is rock with asbestos in it...



We can see red gneiss, green gneiss, quartzite and even epidote (the pistachio green rock in the photograph)



This rock has a smooth surface on some of it, as well as a weathered back surface. Rain and wind erosion has weathered all the other minerals from the weathered surface.



As you're facing the building, where it says *First Church of Christ Sciences*, near the door there's a greenish rock.

If you look closely at the greenish rock you can see little layers of fibres of asbestos in the rock.

Head back to Duke Street and go east until you get to College. At 120 Duke Street is our next stop, the University of Wilfred Laurier building.

St. Jerome's Building



The red bricks are sandstone. If you look closely then you can see there are no fossils present. But if you look closer to the base of the building you will see that there are fossils in the Indiana limestone which surrounds the doorway.

Continue down Duke Street until you get past Young Street. We're walking past St. Mary's church and the residence behind the church.

St. Mary's Church



The base of these two buildings is made of Whirlpool Sandstone from Cataract

To get back to the parking lot keep going down Duke Street, past Ontario Street, and on the west side of Duke Street will be the parking lot.

