

Overview

Location

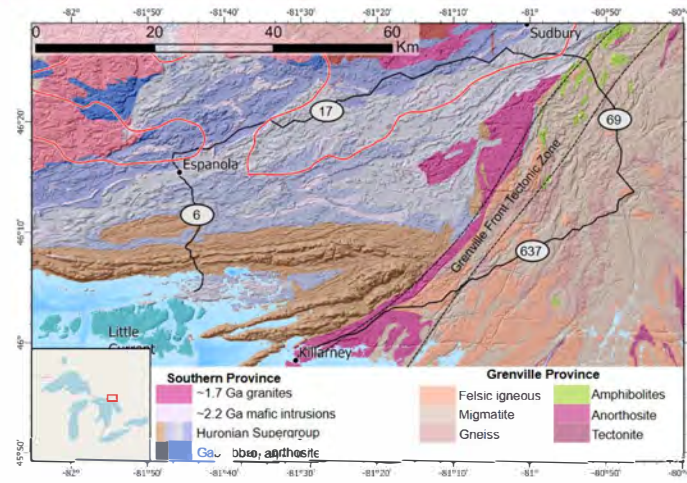


Killarney Townsite

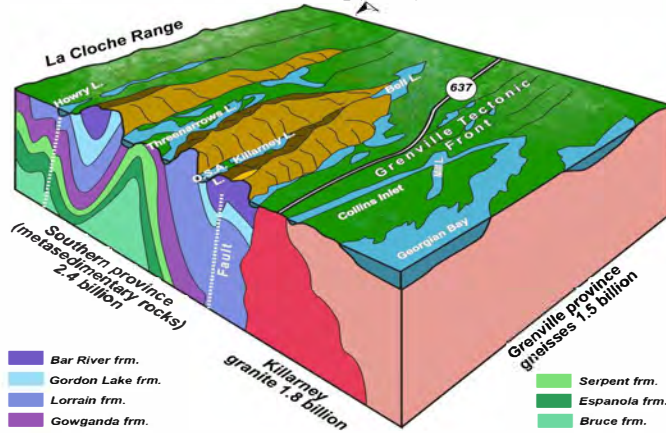
Killarney's history dates back approximately 2.5 billion years when sedimentary rocks were deposited along the coast of the ancient continent of Superia in the Huronian Ocean. Around 1.8 billion years ago, volcanic island landmasses collided with that coastline, pushing those sedimentary layers northwards into what we now see as the majestic La Cloche Range. By 1.7 billion years ago, large bodies of magma were cooling deep underground, crystallizing into the red granites for which Killarney would become known.

Between 1.4 to 1.0 billion years ago, the region was involved in yet another continental collision as the Supercontinent Rodinia came together, lifting the Grenville Mountains at the suture. After the levelling of the Grenville Mountains by a lengthy period of erosion, shallow seaways teeming with life flooded over North America draping fossiliferous sedimentary strata over Precambrian bedrock, now exposed on Manitoulin Island.

The past 2 million years saw repeated continental-scale glaciation as ice, 2 km thick, carved rounded features out of bedrock. As the last ice sheet withdrew northwards about 10,000 years ago Georgian Bay was briefly flooded by a large ice-dammed lake (Glacial Lake Algonquin). Killarney Townsite is built on the flat clay floor of this lake. The region has been inhabited for millenia. Tools crafted by the semi-nomadic Plano people from white quartzite found in the La Cloche mountains are at least 10,000 years old. Killarney Channel is also known by it's Anishinaabemowin name, Shebahonaning, or 'Safe Canoe Passage'.



Directions: Killarney Townsite is located at the southern terminus of Highway 637.



Above: Block model of the subsurface geology.



About the Georgian Bay Geopark:

The Georgian Bay Geopark, located in Ontario, Canada showcases the exceptional geological significance of the region through education and community outreach.

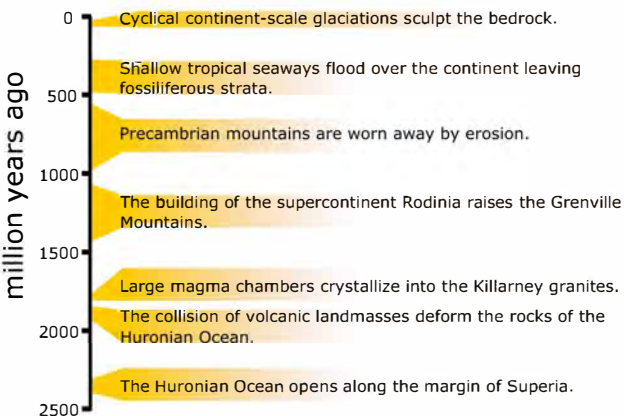
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The **St. Paul Street Boat Launch** at the northwest end of St. Paul Street provides views of the iconic white ridge of the La Cloche Range. The ridge is made up of a layer of tough quartzite rock which is resistant to erosion and was tilted upwards during the 1.8 billion year old Penokean Orogeny (see block model on back panel). Blocks of quartzite can be found scattered around town for closer inspection.



The grounds of **Killarney Mountain Lodge** showcase many excellent examples of rounded granite rock knobs sculpted by the southerly flow of ice that was as much as 2 km thick. These distinctive formations, known as 'whalebacks,' bear a resemblance to the backs of whales breaking above the surface (above). Look for deep scratches (called 'striations'), crescentic 'chattermarks' (below left) from debris lodged in the ice scraping or impacting the bedrock surface, and sinuous scours from highly pressurized glacial meltwaters.

Route map: Total walking time is about 1 hour



Thebo Point - The Lighthouse East Trail across Thebo Point traverses increasingly fractured and foliated granites (left) as a result of entering the deformation zone of the 1.1 billion year old Grenvillian Mountains to the east. Upon close examination of the rock texture, crystal shapes have been flattened by this deformation (right).



The Killarney East Lighthouse was originally known as Red Rock Lighthouse because of the way that water reddens the underlying granites. Above the red colouration, there is a band of thriving bright yellow lichen.



St. Bonaventure's Church (left) was built in 1951 from local blocks (right) of pink granite and white quartzite from the La Cloche Ranges, and white sandstone from Manitoulin Island. Several of the stained-glass windows in the church depict the region's characteristic rolling hills.



Right - Paving stones on the patio of the Lodge are made of billion year old gneiss and illustrate the remarkable effects of the metamorphism of solid rock by the intense heat and pressure 25 km below the Grenville Mountains. Such conditions cause 'foliation', or the alignment of mineral grains into streaks, and localized melting of rock into small veinlets.



Killarney Channel (pictured on front panel) is among several prominent straight linear fractures that traverse the Canadian Shield, such as those found in Collins Inlet, French River, and Key Harbour. These fractures weaken the rock, making it highly vulnerable to glacial erosion and are preferentially worn away by the forces of ice.