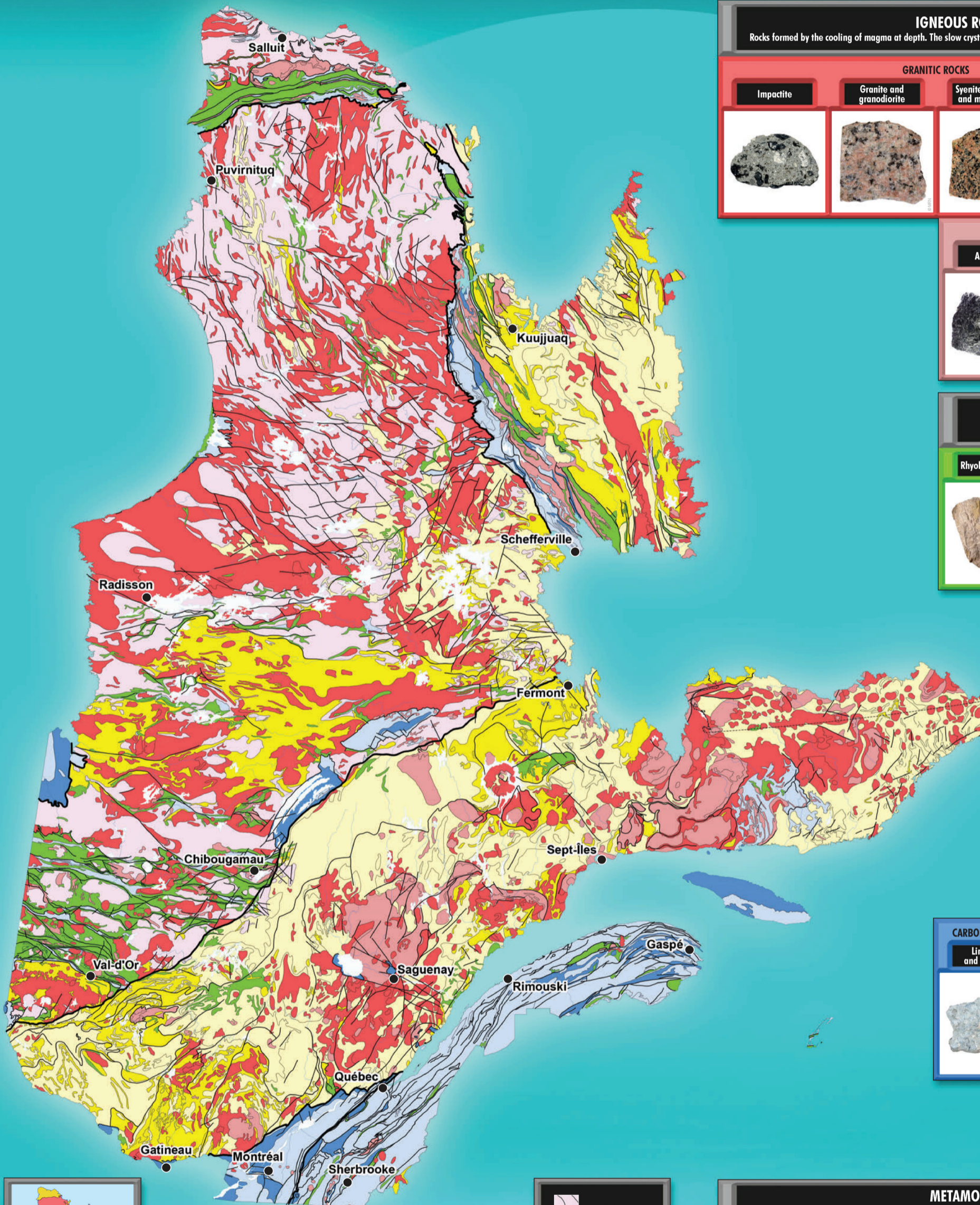


# SIMPLIFIED GEOLOGY OF QUÉBEC

This simplified geological map shows the distribution of the main rock types and geological provinces found in the Province of Québec. In geology, rocks are divided into three major categories: igneous (intrusive and volcanic), sedimentary and metamorphic. The ages of the rocks play an important role in deducing and understanding geological events.



## IGNEOUS ROCKS (intrusive)

Rocks formed by the cooling of magma at depth. The slow crystallization of the magma is responsible for the rock's granular texture.

GRANITIC ROCKS				TONALITIC ROCKS
Impactite	Granite and granodiorite	Syenite, monzonite and monzodiorite	Orthopyroxene-bearing granitoids	Tonalite

MAFIC ROCKS		
Anorthosite	Gabbro and diorite	Pyroxenite, peridotite and dunite

## IGNEOUS ROCKS (volcanic)

Rocks formed by the cooling of magma at surface following the eruption of lava from a volcano.

Rhyolite and dacite	Basalt and andesite	Komatiite

## SEDIMENTARY ROCKS

Rocks derived from the accumulation of sediments laid down in layers, consolidated after they became buried at depth in the Earth's crust.

TERRIGENOUS ROCKS		
Wacke, mudrock, slate and shale	Sandstone	
CARBONATE ROCKS		
Limestone and dolostone	Conglomerate	Iron formation

## FAULT

A break in the Earth's crust showing evidence of movement between two blocks of rock separated by the fault.

## METAMORPHIC ROCKS

Rocks formed by the recrystallization of igneous or sedimentary rocks subjected to the higher pressures and temperatures found at depth in the Earth's crust.

IGNEOUS ROCKS			SEDIMENTARY ROCKS	
Granitic gneiss	Tonalitic gneiss	Migmatite	Paragneiss	Marble

## Geological provinces

Québec has been subdivided into six major entities known as geological provinces. The division is based on the ages of the rocks as well as processes related to plate tectonics.

Province	Age (Ma)
Hudson Bay Platform	410 to 450
St. Lawrence Platform	430 to 500
Appalachians Province	330 to 570
Grenville Province	600 to 2700
Churchill Province	1100 to 2500
Superior Province	2500 to 4300

Ma - millions of years