

LANDFORM REGIONS IN CANADA

Classroom Notes and
Descriptions



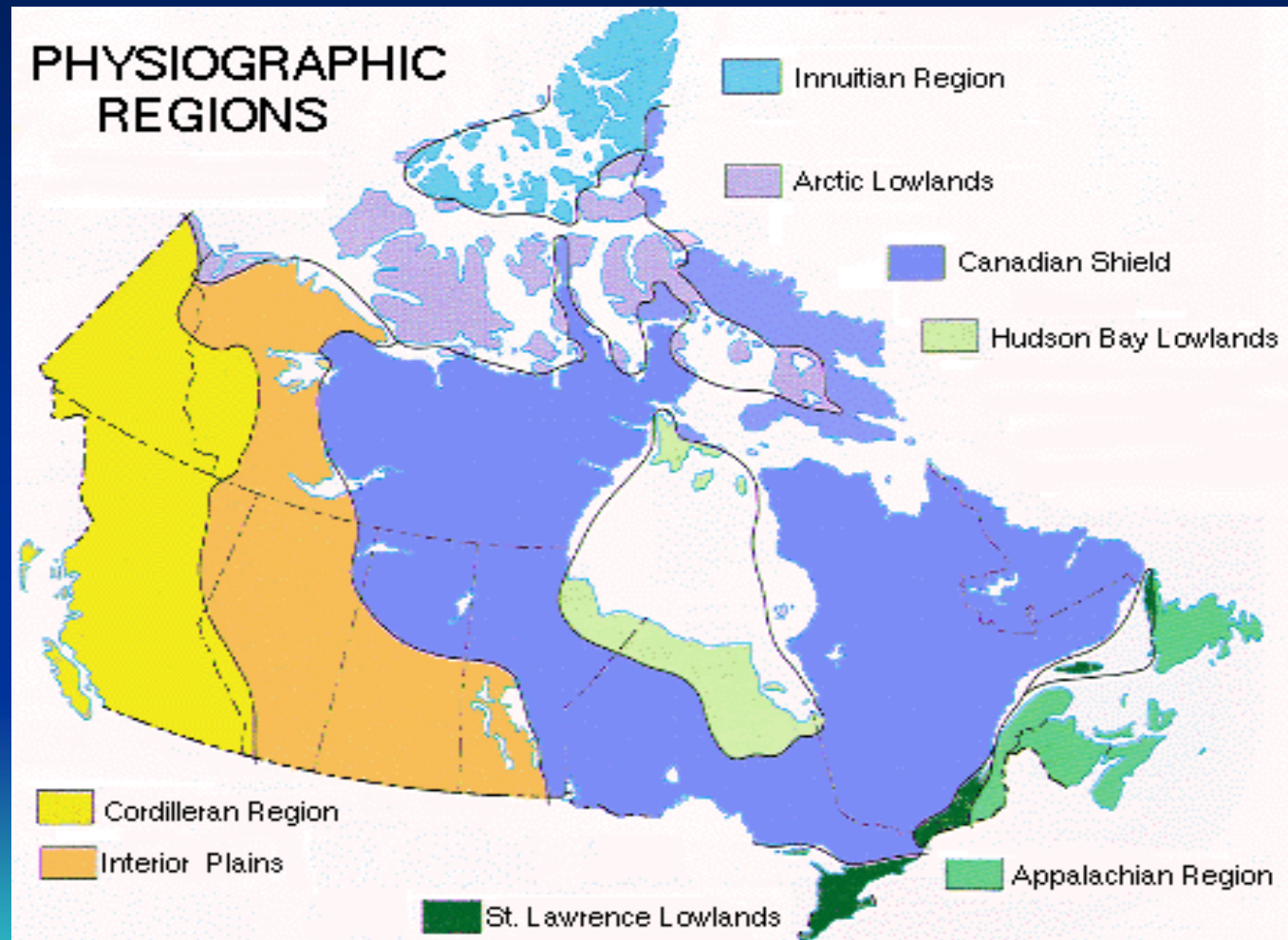
Landform Regions in Canada

- There are eight distinct landforms in Canada:
 - Western Cordillera Region
 - Interior Plains
 - Canadian Shield
 - Hudson Bay Lowlands
 - Great Lakes-St. Lawrence Lowlands
 - Appalachian Region
 - Arctic Lowlands
 - Innuitian Mountains



LANDFORM REGION MAP OF CANADA

Sometimes the term 'Landform Region' is replaced by the term 'Physiographic Region'



WESTERN CORDILLERA

The term 'cordillera' means mountain or mountainous. In Canada, the Western Cordillera region covers most of British Columbia and the Yukon Territory. The great height and rugged appearance of the mountains tell us they are very young. The collision of the North American and the Pacific plates uplifted the region into several mountain ranges.

The mountains and valleys of the Western Cordillera run in a north-south direction. Many people use the term 'Rocky Mountains' to describe the Western Cordillera – but, in truth, the Rockies are just a small part of the Western Cordillera.

There are three major divisions of the Western Cordillera. The Rocky Mountains and the Columbia Mountains, along with several other ranges make up the eastern part of the region. The Rocky Mountains are formed of folded and faulted sedimentary rock which contain many fossils. The Columbia range, while also made up of sedimentary rock contains many intrusions of metamorphic rock.



The Rocky Mountains

WESTERN CORDILLERA

The central part of the Western Cordillera is called the Interior Plateau. It is a highland region with rugged plateaus divided by deep river valleys. This area is composed of metamorphic and igneous rocks from past volcanic activity. One of the major rivers running through this area is the Fraser River.



Helix Gate on the Fraser River

The western part of the Western Cordillera is called the Coast Mountains region. It is made of igneous and metamorphic rock and are the direct result of plate tectonics. This is a very active seismic area and contains the highest peaks in Canada. The highest peak is located in the northern part of the Coast Mountains near the border with Alaska. It is called Mount Logan.



Mount Logan

INTERIOR PLAINS

The Interior Plains in Canada are often called the Prairies. This region extends from the US border in the south to the Arctic Ocean in the north. It makes up the southern parts of Manitoba and Saskatchewan, almost all of Alberta and the western part of the Northwest Territories. The Interior Plains are made up of sedimentary rock since long ago this area was covered by shallow seas. Most of the oil and gas in Canada is located in this region.

Differential erosion has caused the formation of several escarpments resulting in four different levels of elevation on the Prairies. Three of these regions are located in the southern part of the Interior Plains and the other in the north. On the western part of the Interior Plains is the Alberta Plains – including the foothills of the Rockies.



INTERIOR PLAINS

The Alberta Plain is separated from the Saskatchewan Plain by an escarpment called the Missouri Coteau which runs from the US north almost along the Alberta – Saskatchewan border. The Saskatchewan Plain is very flat and lower in elevation than the Alberta Plain. It is here that we find much of the best farmland in Canada and almost all of our wheat fields.

The eastern part of the Interior Plains is called the Manitoba Lowlands and is separated from the Saskatchewan Plains by the Manitoba Escarpment. The Manitoba Lowlands are very flat and are located in the Southern part of Manitoba – including the several large lakes found there.

The final area of the Interior plains is called the Mackenzie Lowlands and stretches north from Alberta along the Mackenzie Valley to the Arctic Ocean. While the rest of the Interior Plains slope eastward the Mackenzie Lowlands slope toward the north.



Saskatchewan Wheat Fields



The Manitoba Lowlands

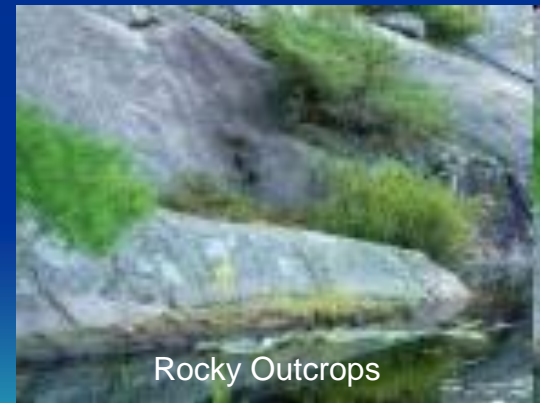
CANADIAN SHIELD

The Canadian Shield is the geographic foundation of Canada. More than half of Canada is covered by the Shield. Metamorphic and igneous make up the Shield – it contains some of the oldest rocks in the world. Once a major mountain region, the Canadian Shield is now relatively flat with rounded rocky hills.



The area has been subjected to a number of major glaciations. The scraping and gouging action of the ice has left depressions in the bedrock which have filled with water to form hundreds of thousands of lakes.

The bedrock is impervious – water does not pass through it. The sand and gravels deposited by the glaciers (from the scraping and gouging) have forced the rivers to flow in many different directions – resulting in a very disorganized pattern of winding rivers, lakes and swamps.



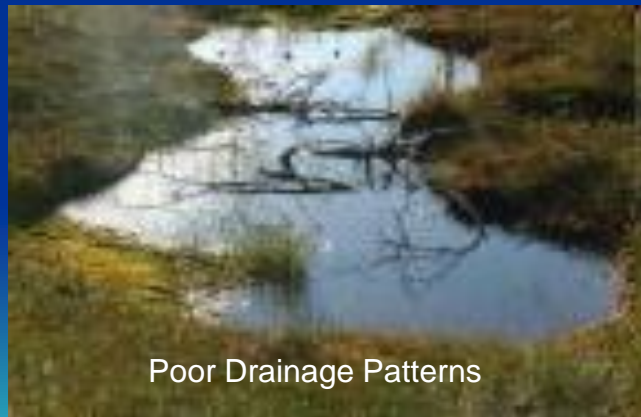
CANADIAN SHIELD



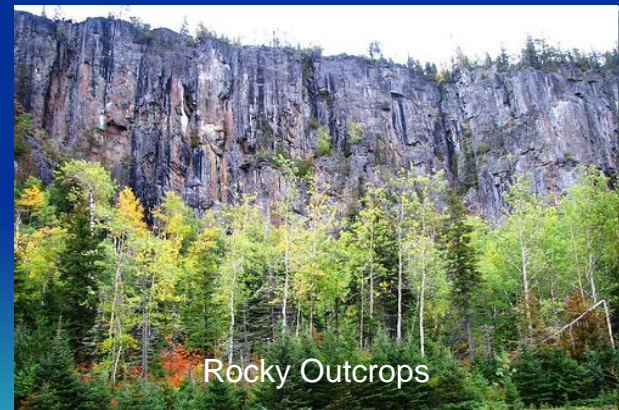
Gouges and Scrapes



Hundreds of Lakes



Poor Drainage Patterns



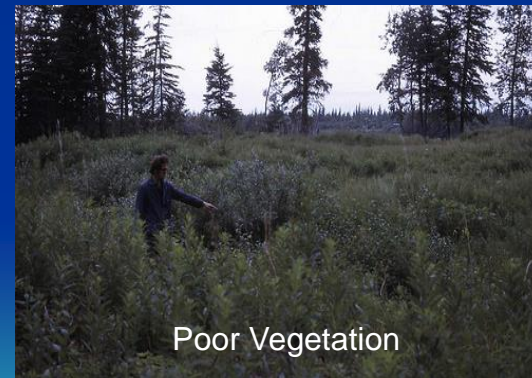
Rocky Outcrops

HUDSON BAY LOWLANDS

Around the southwestern shore of Hudson and James Bay is a very flat, low area covered by swampy forest called the Hudson Bay Lowlands. This area has layer of sedimentary rock resting on top of the ancient rocks of the Canadian Shield.



In this region the swampy areas are called muskeg – the water is often stagnant. Several rivers meander through the area. The vegetation is mostly bushes and isolated trees.



GREAT LAKES – ST. LAWRENCE LOWLANDS

The Great Lakes – St . Lawrence Lowlands consists of two regions. The Great Lakes Lowlands are located in Southern Ontario. The lowlands are formed from sedimentary rock – and there are several escarpments in the area – the most famous is the Niagara Escarpment which extends from Niagara Falls to Manitoulin Island.



Niagara Escarpment

The Great Lakes portion of the lowlands was subjected to many glaciations in the past – creating a rolling landscape. Several major glacial features are evident in the landscape – including eskers, drumlins and moraine. A significant moraine – the Oak Ridges Moraine runs for about 160 km – parallel to Lake Ontario .



Oak Ridges Moraine

GREAT LAKES – ST. LAWRENCE LOWLANDS

The St. Lawrence Lowlands is separated from the Great Lakes Lowlands by a thin wedge of the Canadian Shield that cuts across the St. Lawrence and extends into the United States just east of Kingston. This area is called the Frontenac Axis. The Thousand Islands in the St Lawrence River are the remains of the shield after being subjected to the erosive force of the St. Lawrence River.



Thousand Islands

The St. Lawrence Lowland was formed by a faulting action – forming a rift valley. The St Lawrence River flows through this valley on its way to the Atlantic Ocean. Interesting features in the St. Lawrence Lowlands are monadnocks. They are volcanic intrusions into the sedimentary bedrock of the area. The softer sedimentary rocks erode leaving the harder igneous rocks looking like small mountains growing out of the ground. Mont Royal in Montreal is a monadnock.



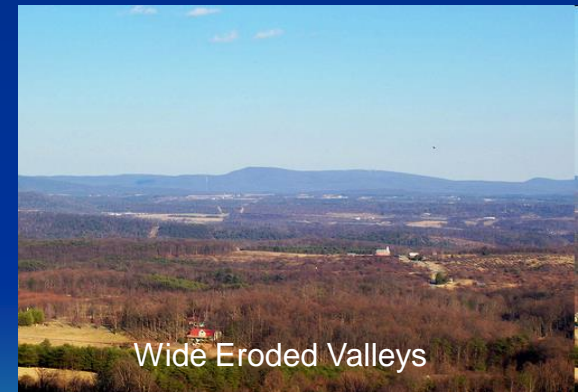
Monadnocks

APPALACHIAN REGION

The Appalachian Mountains runs through the Gaspé Peninsula of Quebec, into the Maritimes provinces and all the way to Newfoundland. They are the oldest highland region in Canada – formed when North America collided with Europe and North Africa during the formation of Pangaea.

These mountains are made of mainly sedimentary rock though there are areas where volcanic activity and faulting have created igneous and metamorphic outcroppings.

Millions of years of erosion have reduced the once jagged peaks to rolling mountains and hills. More recent glaciations have added to the leveling of these mountains.



ARCTIC LOWLANDS AND INNUITIAN MOUNTAINS

The Arctic Lowlands and Innuitian Mountains are the last of the landform regions in Canada. They occupy the northern part of the country – basically everything north of the Canadian Shield.

The Arctic Lowlands are made up of a series of islands and have a gently rolling landscape and are mostly sedimentary in structure.

The Innuitian Mountains form the northern edge of the country and are primarily made of igneous and metamorphic rocks with some areas of sedimentary bedrock.



Innuitian Mountains



Arctic Lowlands