

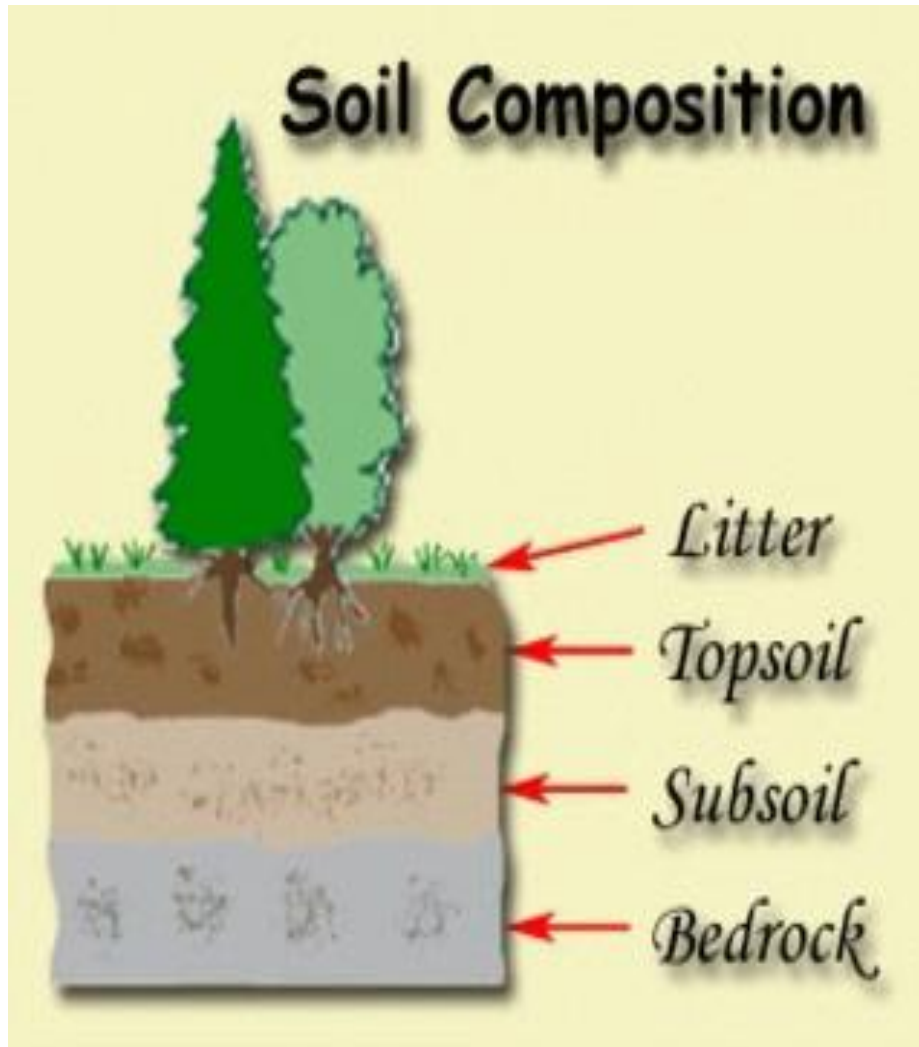
Soil Formation and Composition

Biomes and
Invasive Species

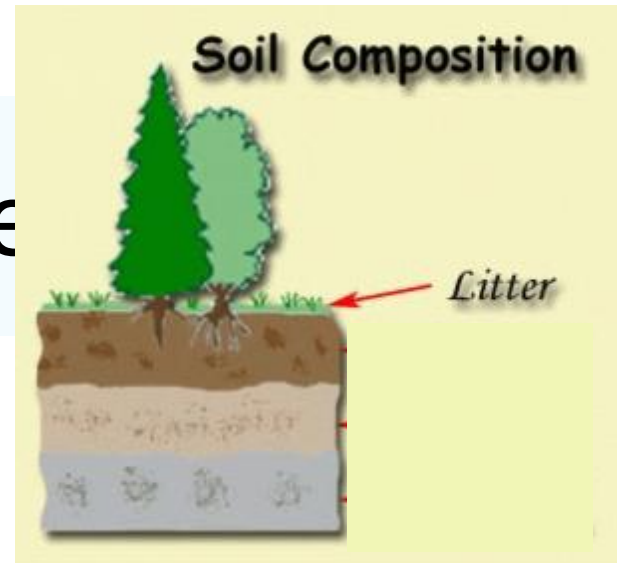
Soil Formation

- From Notes on Succession
- ***Lichens = hardy autotrophs which can live on bare rock.***
- ***secrete acids which dissolve rock.***
- ***Weathering produces cracks in rock.***
- ***Particles of rock, dust, etc. collect in cracks, forming a primitive soil.***
- [Link](#)

Soil Composition



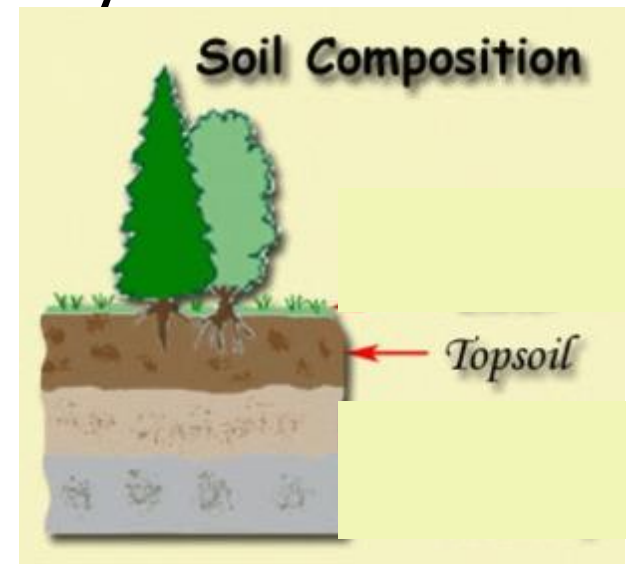
Soil Layer



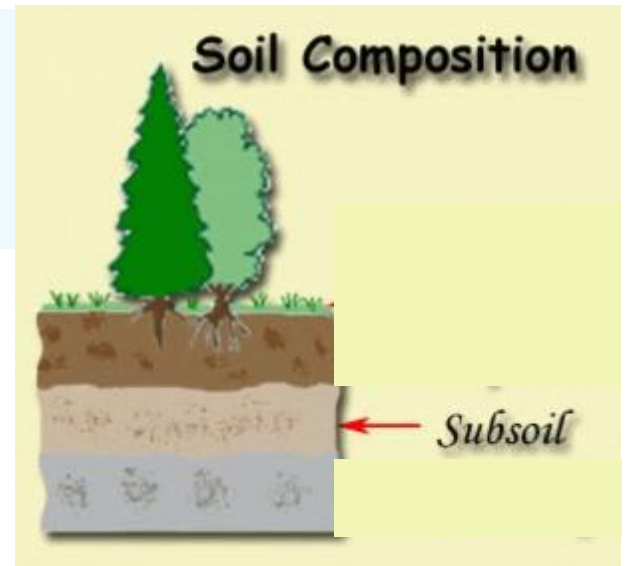
- 1. Litter Layer
- Layer on top of soil
- Made up of partially decomposed plant material
- Acts as a blanket (insulation)
 - Reduces temperature variation
 - Reduces water loss by evaporation

Soil Layers

- 2. Topsoil - consists of
 - fine textured mineral particles (sand, clay, etc.)
 - humus - organic material (decaying plant and animal material)
- important to life since this is the layer in which plants grow.
- Usually very porous – has spaces for air and water
- dark in color



Soil Layers



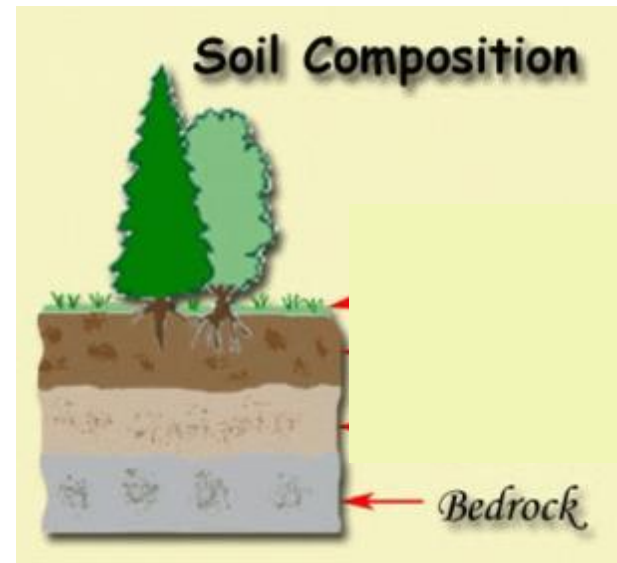
3. Subsoil

- more coarse in texture and has less organic material.
- Few organisms found.
- Plant roots often invade the subsoil to gather water and mineral resources

Soil Layers

- 4. Bedrock – the underlying solid rock
- **not considered a soil layer, but the support for the soil layers above.**

- [Link](#)



Soil Fertility

- Depends upon a number of factors including:
- Nutrient levels (humus and minerals)
- soil pH (acidity)
- porosity to air (oxygen, nitrogen, and carbon dioxide) and water.

Biomes

Biome = large geographical area of the biosphere

- characterized by dominant plant and animal life.
- collection of ecosystems that have similar characteristics (abiotic & biotic)

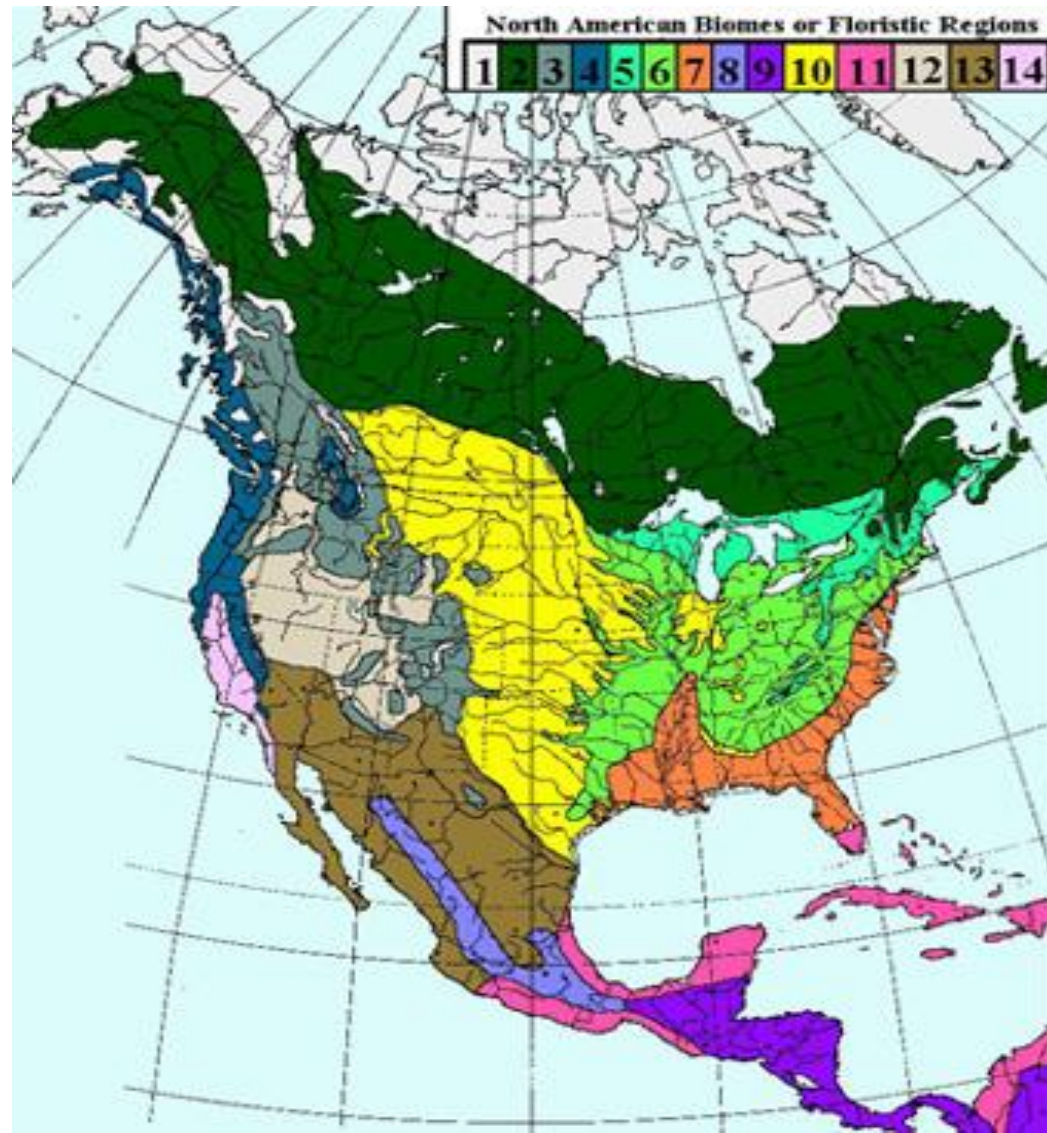
- The Biome that exists in an area is determined by
 - a. Climate – rainfall, temperature, etc
 - b. Physical features – soil conditions, proximity to oceans, mountains, etc

Terrestrial (Land) Biomes of Canada

- tundra (both *arctic* and *alpine*)
- taiga (boreal forest)
- temperate deciduous forest
- grasslands

- (See pages 88-93)

Terrestrial Biomes of the North America



Invasive (Exotic) Species

- New species of plants or animals which enter an area
- Compete with existing (native) species
- Can cause problems for ecosystems

- Examples: Zebra mussels in the Great Lakes (see p. 42-44)
- Green crabs in Newfoundland