

#### Terms to know

- Orographic precipitation
- Windward
- Alpine tundra
- Leeward
- Mountain pine beetle

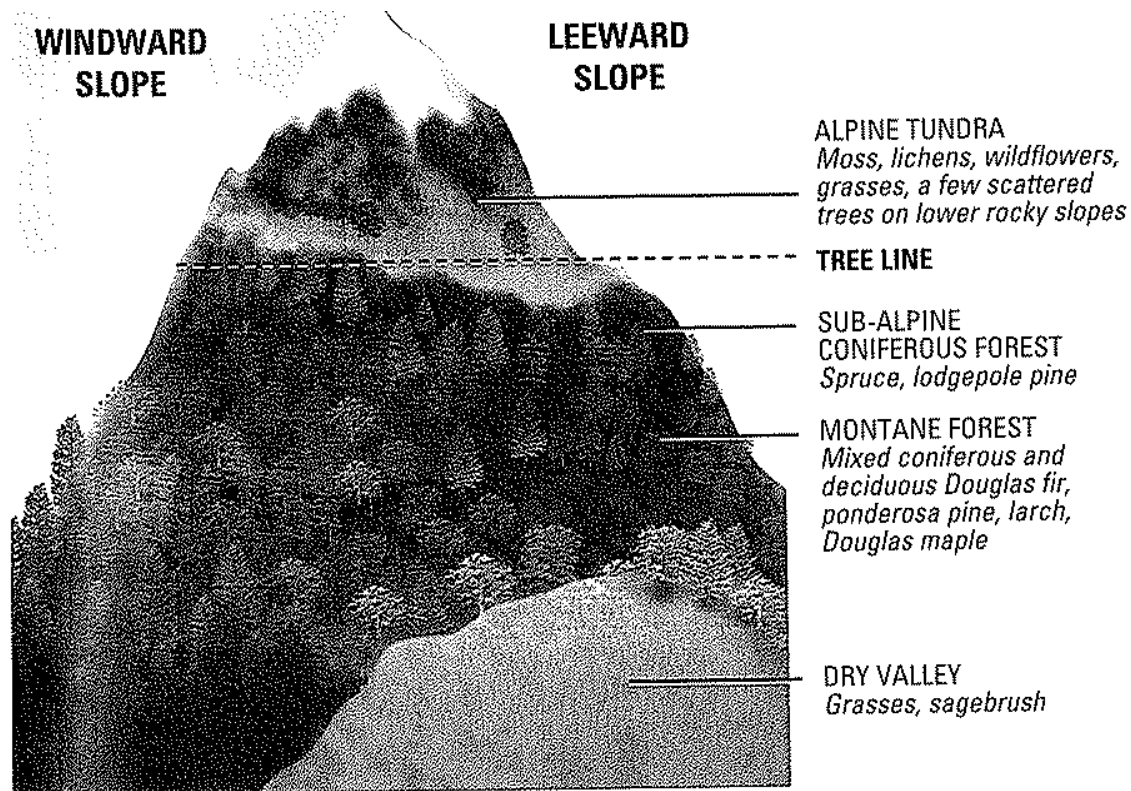
#### Landscape

- This eco zone lies mostly in British Columbia, with 10% in Alberta
- It consists of rows of mountains separated by wide valleys and plateaus (areas of elevated, flat land)
- The montane cordillera is a land of exceptional natural history

#### Natural Vegetation

- Natural vegetation varies greatly in the Montane Cordillera. This depends upon the location on mountains or in valleys
- Why does vegetation vary?
  - Orographic precipitation

p. 123 figure 3.22



▲ **FIGURE 3.22** The natural vegetation of the Montane Cordillera has been compared to a layer cake.

### Orographic Precipitation

#### Windward Slopes of Mountains

- These slopes are located on the west side of the mountain ranges where wind brings moisture from the Pacific.
- Most precipitation is found on the windward side of mountains, so the lower parts of windward slopes are dense with coniferous forests (spruce, pine).

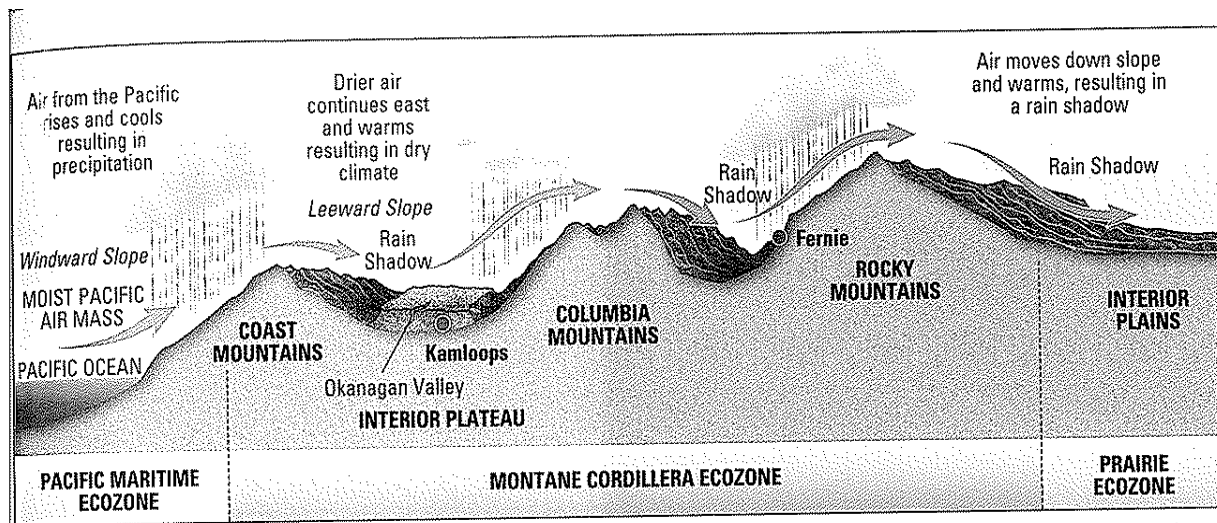
#### Near the top of the Mountain

- The mountain top is too cold and windswept for trees to grow, so alpine tundra vegetation grows here (moss, lichen, and grasses).
- Mountain Peaks
  - Have permanent ice.

#### The Leeward Side of the Mountain

- This side of the mountain is more protected and therefore does not receive much precipitation.

- Grasses and sagebrush grow in valleys of these regions.



▲ **FIGURE 3.21** The Coastal Mountains force moist air masses moving in from the Pacific Ocean to rise. As they rise, the air cools off, clouds form, and their moisture is often dropped as rain or snow. Mountain ranges like the Columbia Mountains in the interior and the Rocky Mountains on the eastern edge of the ecozone force the air to rise again, bringing rain to the western side of the mountains. This is called orographic precipitation.

### Wildlife

- Big horned sheep
- Mountain goats
- Grizzly Bear
- White tailed deer
- Mink
- Etc

### People

- Forestry
  - Coniferous forests of the lower and middle slopes are a great resource for logging companies.
- Tourism
  - Hiking, mountain climbing, hunting, fishing, etc.
- Farming

- Climate and soil conditions in valleys provide ideal conditions for fruit farming and vineyards
- Mining
  - Coal deposits in ancient sedimentary rock provides a great resource for mining companies
- Cattle Ranching
  - Grasslands on interior plateaus are perfect for cattle ranching

### **Threats**

- Logging
  - Logging, replanting and maintaining forest cover is essential for sustaining wildlife habitats
  - Urban growth, industrialization, agriculture and tourism are encroaching on grasslands and increasing pressure on water supplies.
- The Mountain Pine Beetle
  - Kills trees by eating holes in the inner bark, laying eggs there.
  - This leaves a mass of dying red trees, costing the provincial economy millions of dollars
  - Both B.C and Alberta are burning forests in an attempt to contain and kill the pest.