5.1- Biodiversity

Biodiversity - the number of different species in an area.

Biodiversity increases the stability of an ecosystem and contributes to the health of the biosphere.

Extinction when the last member of a species dies.

3 types of Biodiversity

- Genetic
- Species
- Ecosystem

Genetic diversity- the variety of genes that are present in a population.

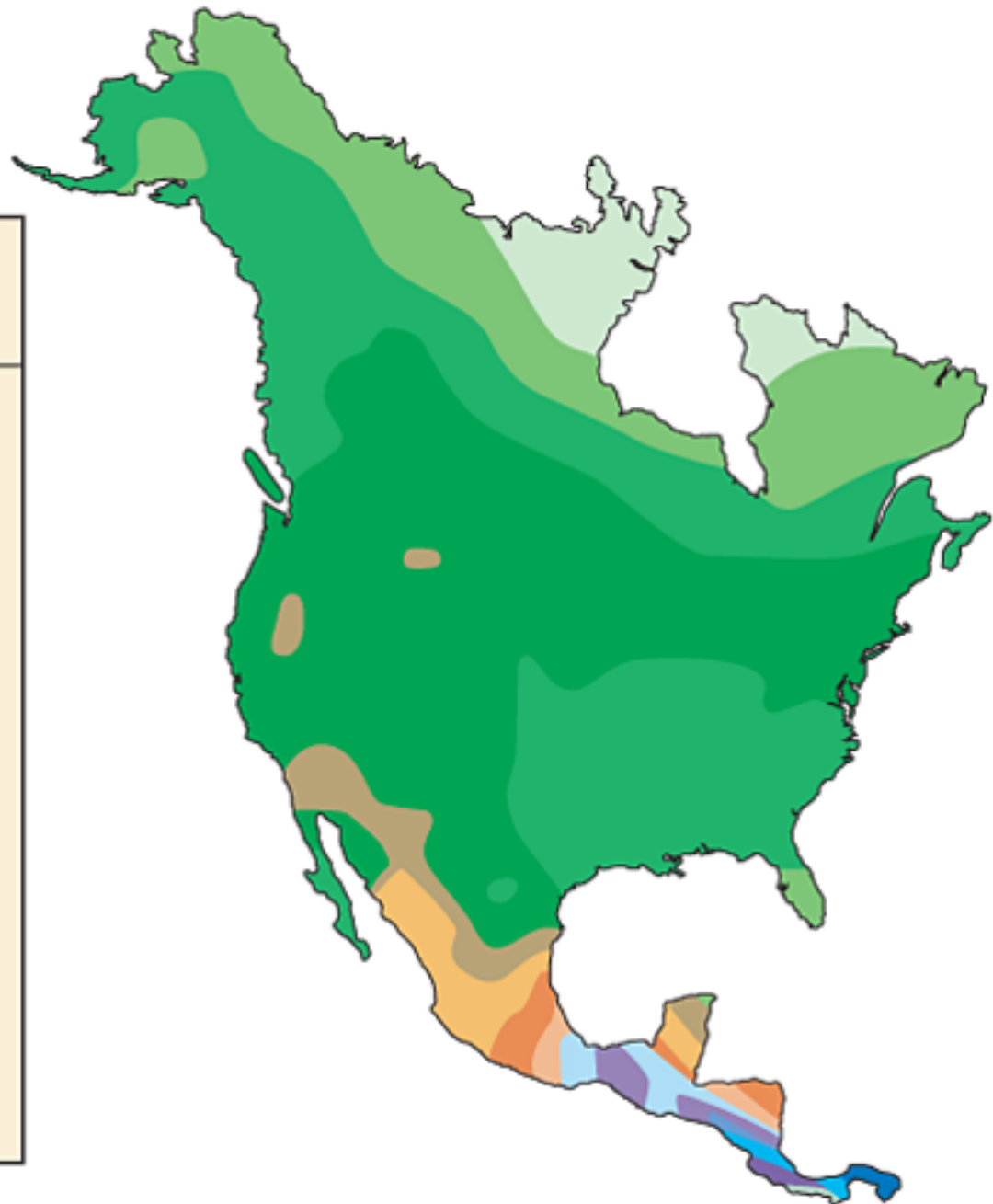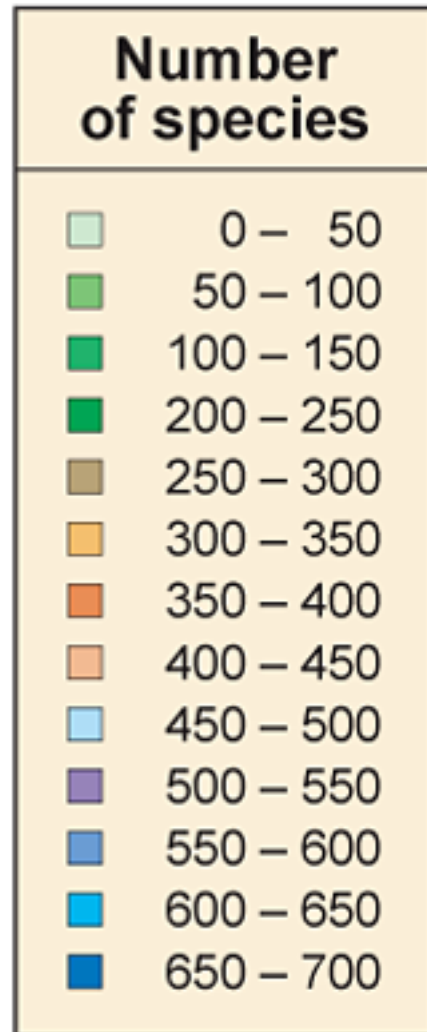Increases the chances that some will survive changing environments or the outbreak of disease.

Genetic Diversity

species diversity- The number of different species and the number of each type.

Distribution of Bird Species

Number of species

- 0 – 50
- 50 – 100
- 100 – 150
- 200 – 250
- 250 – 300
- 300 – 350
- 350 – 400
- 400 – 450
- 450 – 500
- 500 – 550
- 550 – 600
- 600 – 650
- 650 – 700

ecosystem diversity- The variety of ecosystems in the biosphere

Ecosystem- populations and the abiotic factors that support them.

The Importance of Biodiversity

Direct economic value

Indirect economic value

Aesthetic value

Scientific value

Direct economic value- something that can be bought and sold, like food, clothing, medicine

- Humans depend on plants and animals for food, clothing, energy, and medicine.

- Scientists find new extracts from plants and other organisms that help in the treatment of human diseases.

- Most of the world's food crops come from just a few species.

- Wild species serve as reservoirs of genetic traits that might be needed to improve commercial crop species.

Indirect economic value- something that doesn't have a price tag

A healthy biosphere many services :

- Green plants provide oxygen and remove carbon dioxide.

- Natural processes provide drinking water that is safe for human use.

It is difficult to assign an dollar amount to these.

Aesthetic and scientific values

- There is value in maintaining healthy ecosystems that are beautiful or interesting to study