

Biology 307 – Principles of Ecology

Biogeography of Ecosystems

I. Vegetation Zonation

A. Climate-Induced Patterns

II. Biomes

A. Nine Major Terrestrial Biomes

- 1) Tundra
- 2) Taiga
- 3) Temperate Forest
- 4) Temperate Rain Forest
- 5) Tropical Rain Forest
- 6) Savanna
- 7) Temperate Grasslands
- 8) Chaparral
- 9) Desert

III. Life Zones

A. Merriam Life Zones

B. Holdridge Life Zone System

- 1) Three Levels of Classification
 - a. Climatically Defined Life Zones
 - b. Associations
 - c. Actual Cover or Land Use
- 2) Three Assumptions
 - a. Vegetation Patterns Determined by Interaction of Temp and Rainfall
 - b. Geographic Boundaries Correspond to Climate Zone Boundaries
 - c. Discrete Vegetation Units are Recognizable on a Global Scale

IV. Ecoregions

A. Hierarchical Classification

- 1) Domain
- 2) Division
- 3) Province

V. Biogeographical Regions

A. Six Biogeographical Regions/Realms

- 1) Palearctic
- 2) Nearctic

- 3) Neotropical
- 4) Ethiopian
- 5) Oriental
- 6) Australian

VI. Patterns of Species Richness

A. Latitudinal and Altitudinal Gradients