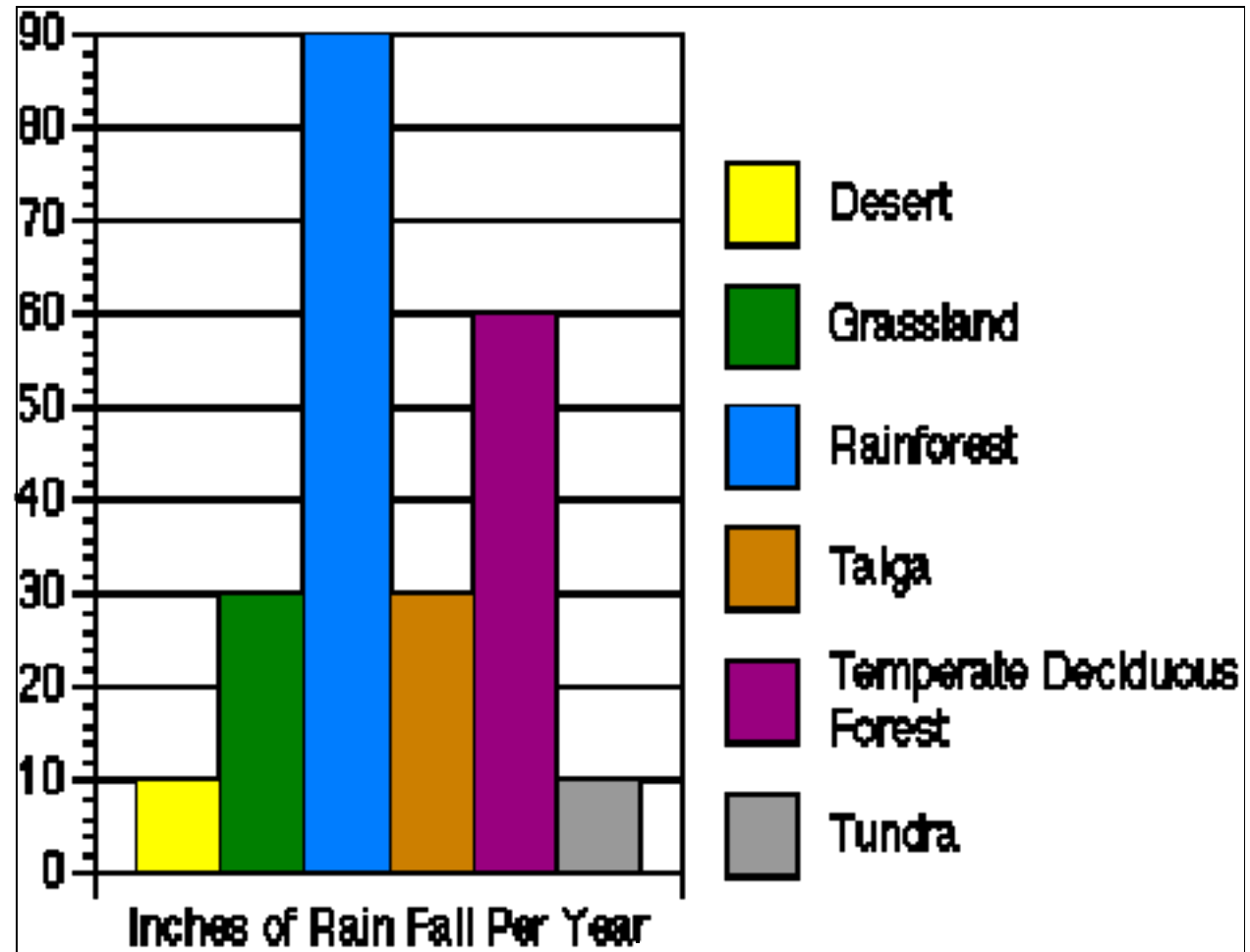


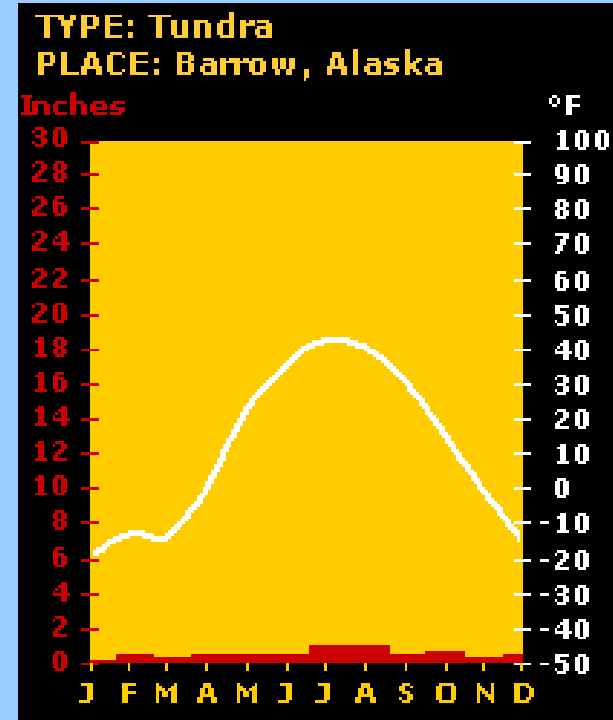
- | | | |
|-----------------|-----------------------------|----------------------------|
| Tropical forest | Polar and high-mountain ice | Temperate deciduous forest |
| Savanna | Chaparral | Coniferous forest |
| Desert | Temperate grassland | Tundra (arctic and alpine) |

What is a Biome?

- **Defined:**
Large area with distinct climate, plant, and animal life
- Climate factors: sun, rain, topography
- Climate determines life



Tundra



- Northern-most latitudes
- Climate: cold temps, low rain (under 5in)
- **Permafrost**: permanently frozen layer of soil
- Reasons for few trees:
 - 1) Low rainfall
 - 2) Frozen soil

Panoramic View



Tundra Life

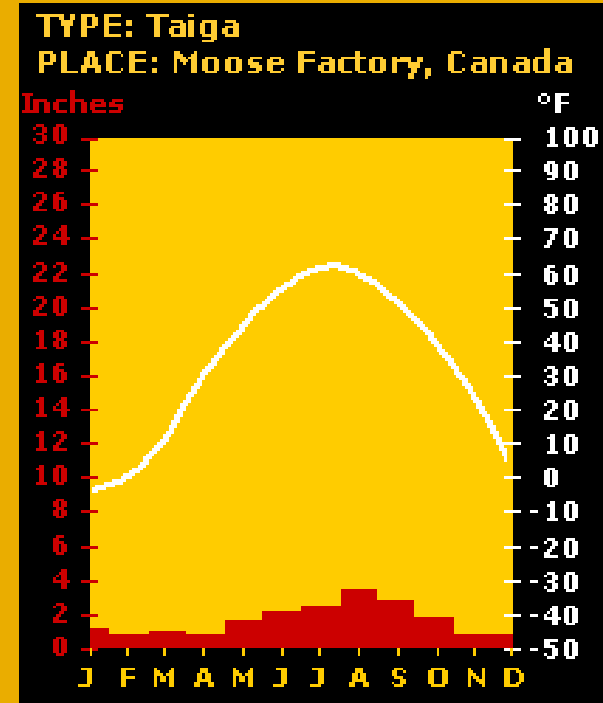


- **Animals**: Rodents, Hares, Moose, Caribou, Deer, Wolves, Migrating birds, Biting insects

- **Plants**: Lichen, Moss, Grass, Shrubs
- Many with red leaves (absorb sunlight)



Taiga



- AKA: Coniferous forest
 - Cones trees dominant
- Found in Northern latitudes & higher altitudes
- Climate:
 - Warm summers, cold winters
 - Average rainfall = 15-30 inches



Taiga Life



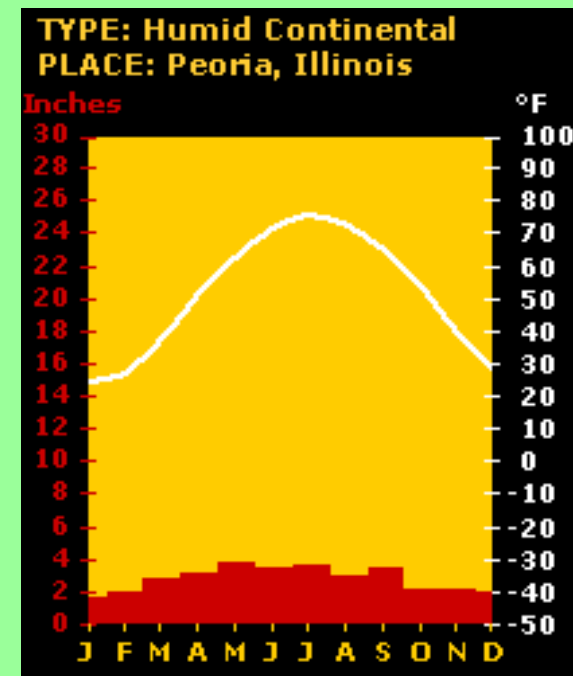
- **Animals**: Moose, Caribou, Black bear, Porcupines, Wolves
- Many migratory & hibernating animals

- **Plants**: Pine, evergreen, spruce, fir trees
- Waxy coating to prevent water loss



© Ron Niebrugge

Temperate Deciduous Forest



- **Temperate**: distinct seasons
- **Deciduous**: Plants that lose leaves during the winter
 - Prevents water loss
- Climate:
 - Warm and cold seasons
 - Total rainfall = 30-60 inches



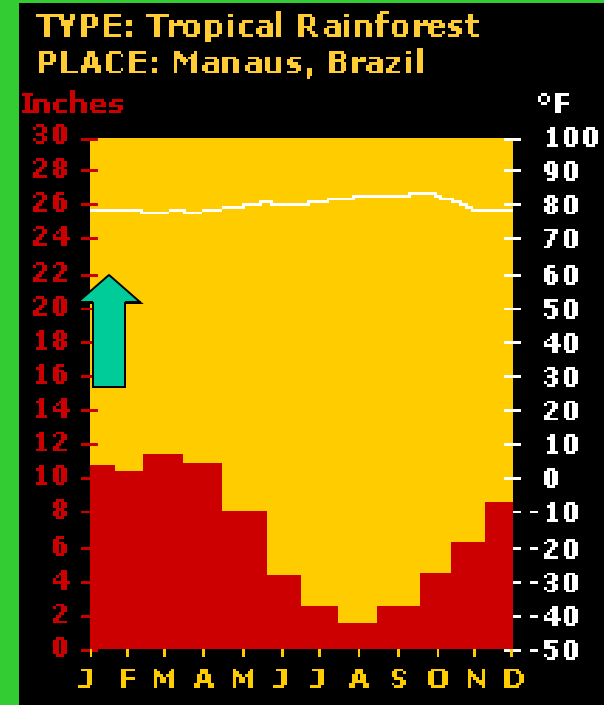
Deciduous Life



- **Animals**: Deer, Squirrels, Opossums, Birds
 - Occupy various forest layers
- **Plants**: Maple, Oak, Elm trees
- Some coniferous trees



Tropical Rain Forest

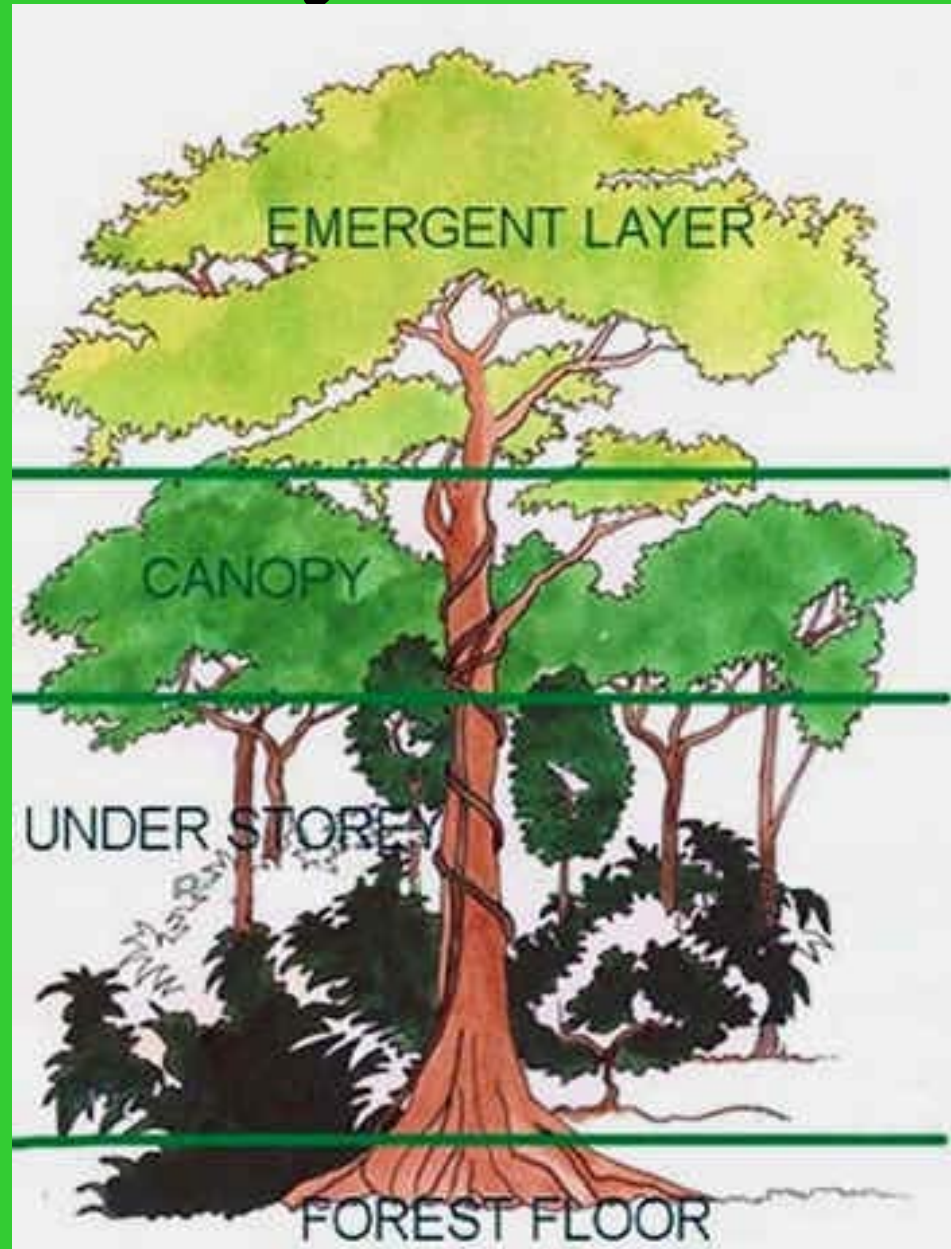


- Climate:
 - Near equator: steady warm year round temperatures
 - Much rainfall year round (60 –160 inches)
- Greatest amount of biodiversity on the Earth



Rainforest Layers

- **Emergent Layer**: Tallest tree tops
 - Must be wind, heat tolerant
- **Canopy**: Dense tree tops allow little light to pass
 - Gaps fill very fast when tree falls (succession)
 - Most animal life
- **Understory**: Small trees, tree trunks, vines
- **Ground level**: Little vegetation
 - Little sunlight





Tropical Rainforest Life



- **Animals**: Parrots, Insects, Bats, Sloth, Monkeys, Reptiles

- **Plants**:
 - **Epiphytes**: plants that grow & attach to taller trees
 - **Bromeliads**: Plants w/ cup-like leaves to collect water

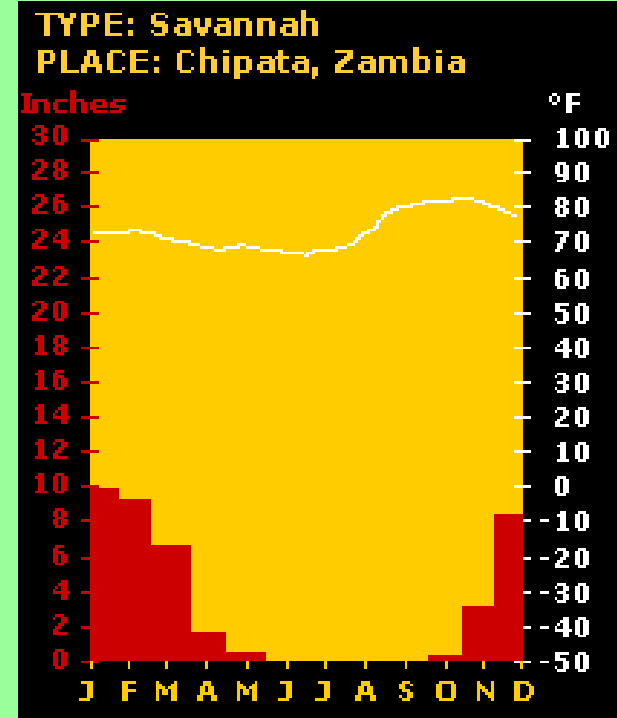
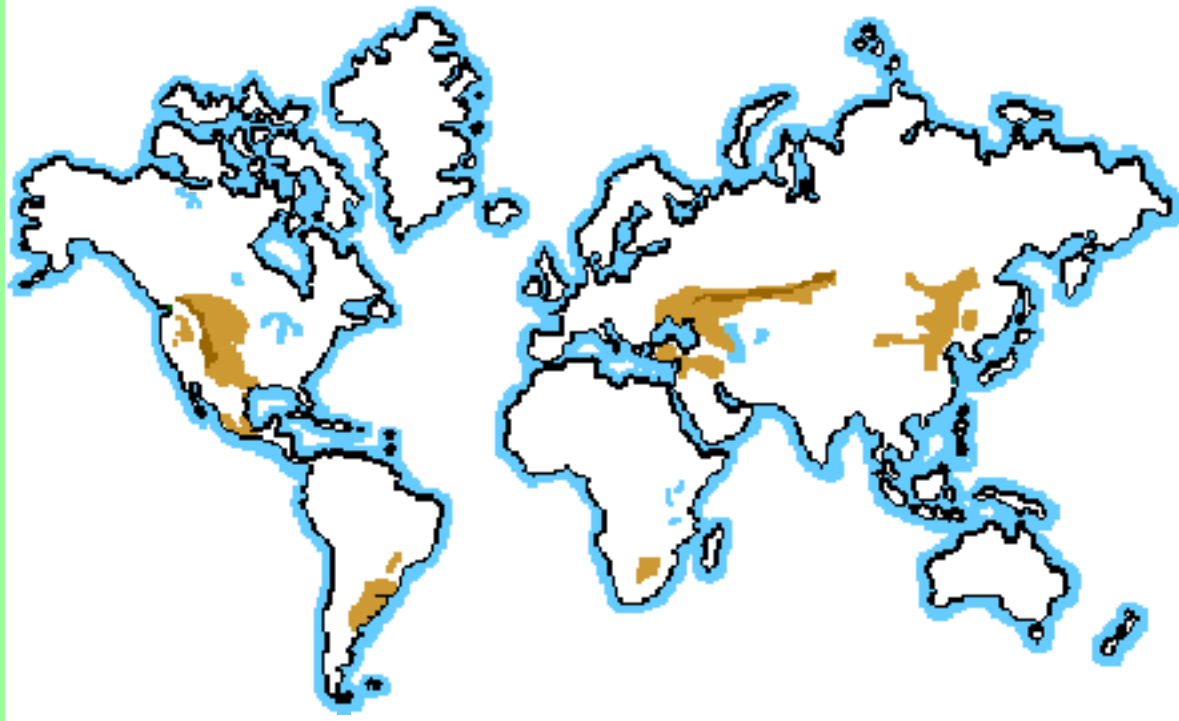
Bromeliads offer microhabitats



Epiphytes grow in the air!



Grasslands

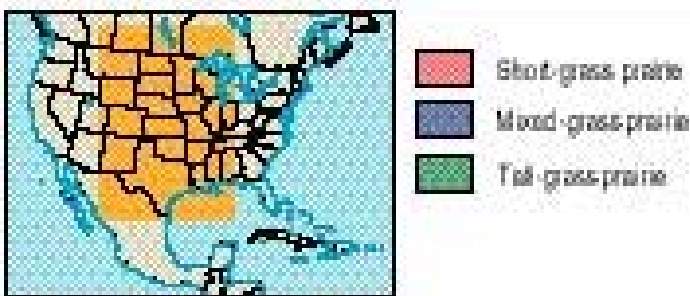
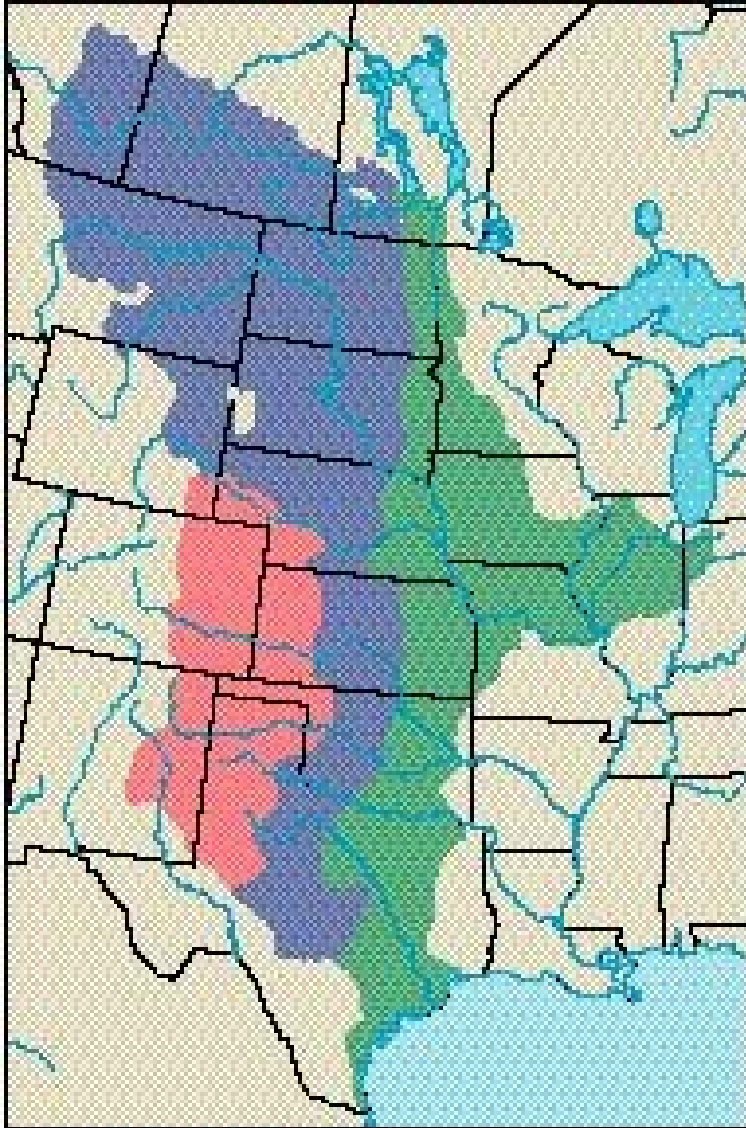


- Areas dominated by grasses
- Rich soil; Commonly used as farmland
- Climate:
 - Rain unevenly distributed (10-30 inches/year)
 - Temp varies



Types of Grasslands

- Rainfall affected by Rocky Mtns.
 - 1) Short Grass (less rain)
 - 2) Mixed Grass (more rain)
 - 3) Tall Grass (most rain)
- Added rainfall from Gulf of Mexico





Grassland Life

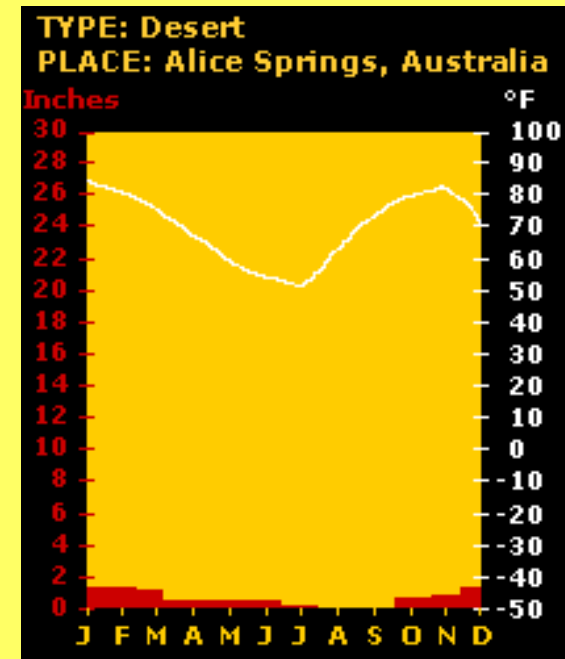


- **Animals**: Grizzly bears, sheep, antelope, rabbits, bison, prairie dogs
- **Plants**: Grasses (up to 2m in height)

©David Jensen



Deserts



- **Desert**: Any area that receives less than 10 inches precipitation per year
- Climate:
 - Dry: under 10 inches
 - Hot temps (Mojave desert)
 - Cold temps (Siberia)



Desert Life

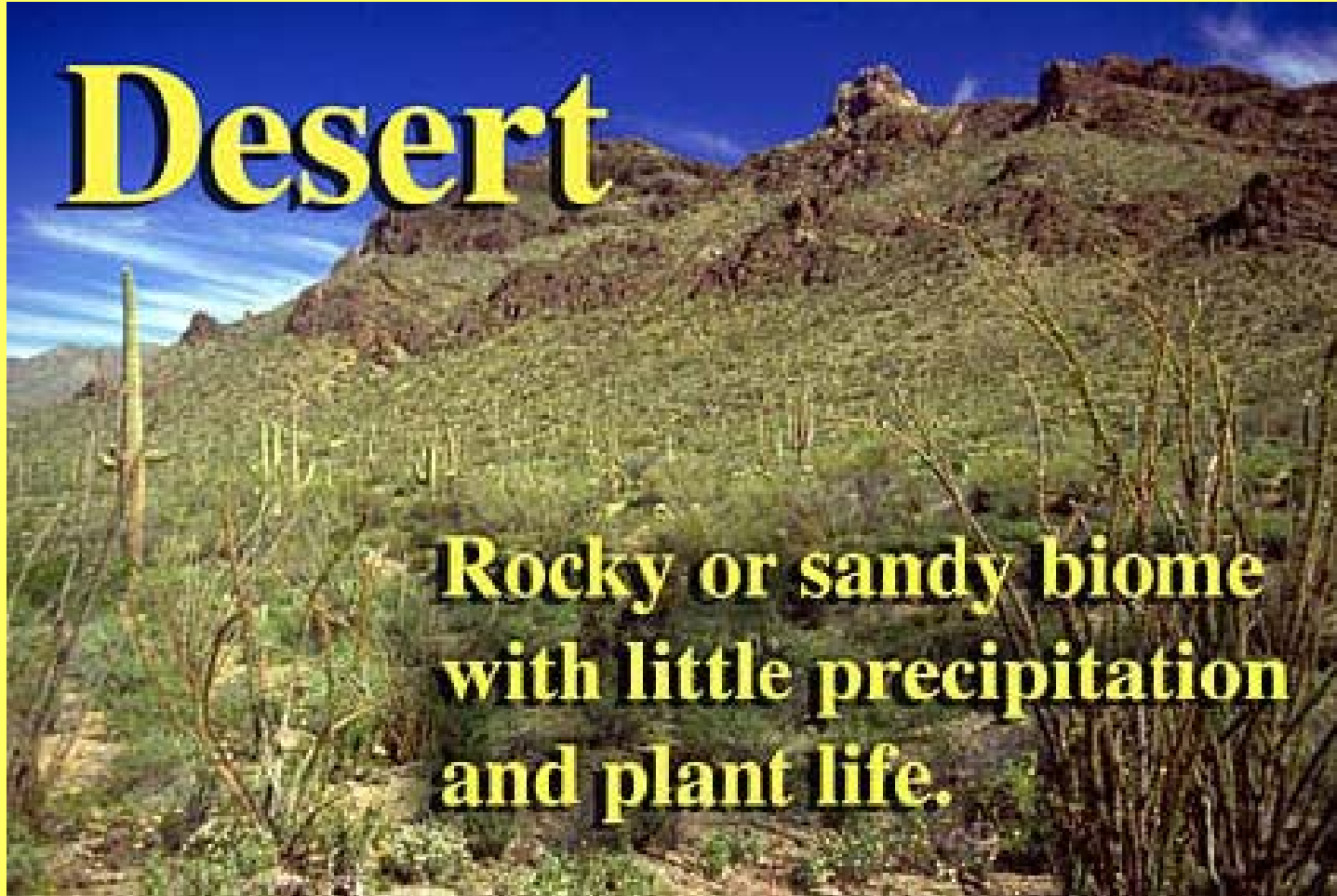


- **Animals**: Burrowing rodents, Jackrabbits
- Cold-blooded reptiles: environment determines body temp

- **Plants**: Cacti, sagebrush
 - Waxy coating prevents water loss
 - Long roots
 - Needle leaves

Desert

**Rocky or sandy biome
with little precipitation
and plant life.**



Warning!



- Most biomes are in immediate danger
- Habitat destruction (deforestation) threatening biodiversity
- Forests & grasslands being turned into farm land
- Conservation laws being overturned

Name this Biome!



Name this Biome!



Name this Biome!



Photo by V. Lindsey

Name this Biome!



Name this Biome!



Name this Biome!



Quick Review

- Each biome has a distinct climate
- More water usually means more life
- Biomes are endangered

