Biomes of the World

Biomes are formed as a result of the **climate** present at a site. **Robert Whittaker**, an American ecologist, plotted rainfall vs. temperature for points all over the globe on a single **graph** (see below).  He then looked at what biomes had developed at those sites, and was able to group the different biomes according to mean annual temperature and precipitation, as the shaded areas in the graph below indicate.  There are several variations on these diagrams, one of them is:



Note that in Whittaker's diagram the **temperature axis is reversed**; that is temperature goes DOWN as you move to the right.  Theoretically, if you know the average temperature and precipitation for a site, you should be able to predict what biome will develop there.  Try your hand - look at the values in the table overleaf, compare them to the diagram above, and predict the biome.

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| **Place** | **Average Temperature oC** | **Annual Precipitation (cm)** | **Biome** |
| **La Selva,** **Costa Rica** | 22.1 | 403.0 | Tropical Rain Forest |
| **Marietta,** **Ohio** | 12.0 | 105.0 | Temperate Deciduous Forest |
| **Pasadena** **California** | 18.2 | 51.8 | Savanna |
| **Ferron,** **Utah** | 8.8 | 20.9 |  |
| **Tucson,** **Arizona** | 21.1 | 21.9 |  |
| **Santa Rosa,** **Costa Rica** | 26.0 | 165.0 | Tropical Seasonal Forest |
| **Brazzaville,** **Congo** | 25.0 | 137.0 | Tropical Seasonal Forest |
| **Lambarene,** **Gabon** | 25.7 | 195.0 | Tropical Seasonal Forest |
| **Amauulu,** **Hawaii** | 20.0 | 410.0 | Tropical Rain Forest |
| **Toolik Lake,** **Alaska** | -8.8 | 18.0 | Tundra |
| **Beijing,** **China** | 11.8 | 63.5 | Temperate Grassland |
| **Seoul,** **South Korea** | 11.2 | 137.0 | Temperate Deciduous Forest |
| **Archbold Biological Station** | 29.1 | 131.0 | Tropical Seasonal Forest\* |
| **Everglades National Park**  | 28.1 | 159.0 | Tropical Seasonal Forest\* |