

Beta Diversity

- Beta diversity measures the diversity *between* samples.
- The distance between each pair of samples (with respect to community composition) is calculated.
- There are many ways to calculate beta diversity; we will use one: Bray-Curtis

Bray-Curtis Dissimilarity

- For two samples, i and j :

$$\frac{\text{unique species counts}}{\text{total counts}}$$

- S_i and S_j = sum of counts in samples i and j
- C_{ij} = sum of min(counts) for taxa observed in both i and j

$$BC_{ij} = \frac{S_i + S_j - 2 * C_{ij}}{S_i + S_j}$$