

Alpha Diversity Method 2

- **Shannon's Diversity**
- s = number of species
- p_i = proportion of counts attributable to species i
- equal representation leads to high diversity index
(play with it in R)

$$H = - \sum_{i=1}^s (p_i \log_2 p_i)$$

Alpha Diversity Method 3

- **Chao1**

$$chao1 = S_{obs} + \frac{F_1^2}{2F_2}$$

- S_{obs} = total observed species
- F_1 = number of singletons
- F_2 = number of doubletons

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