

# A Deep Dive Calculating Biodiversity



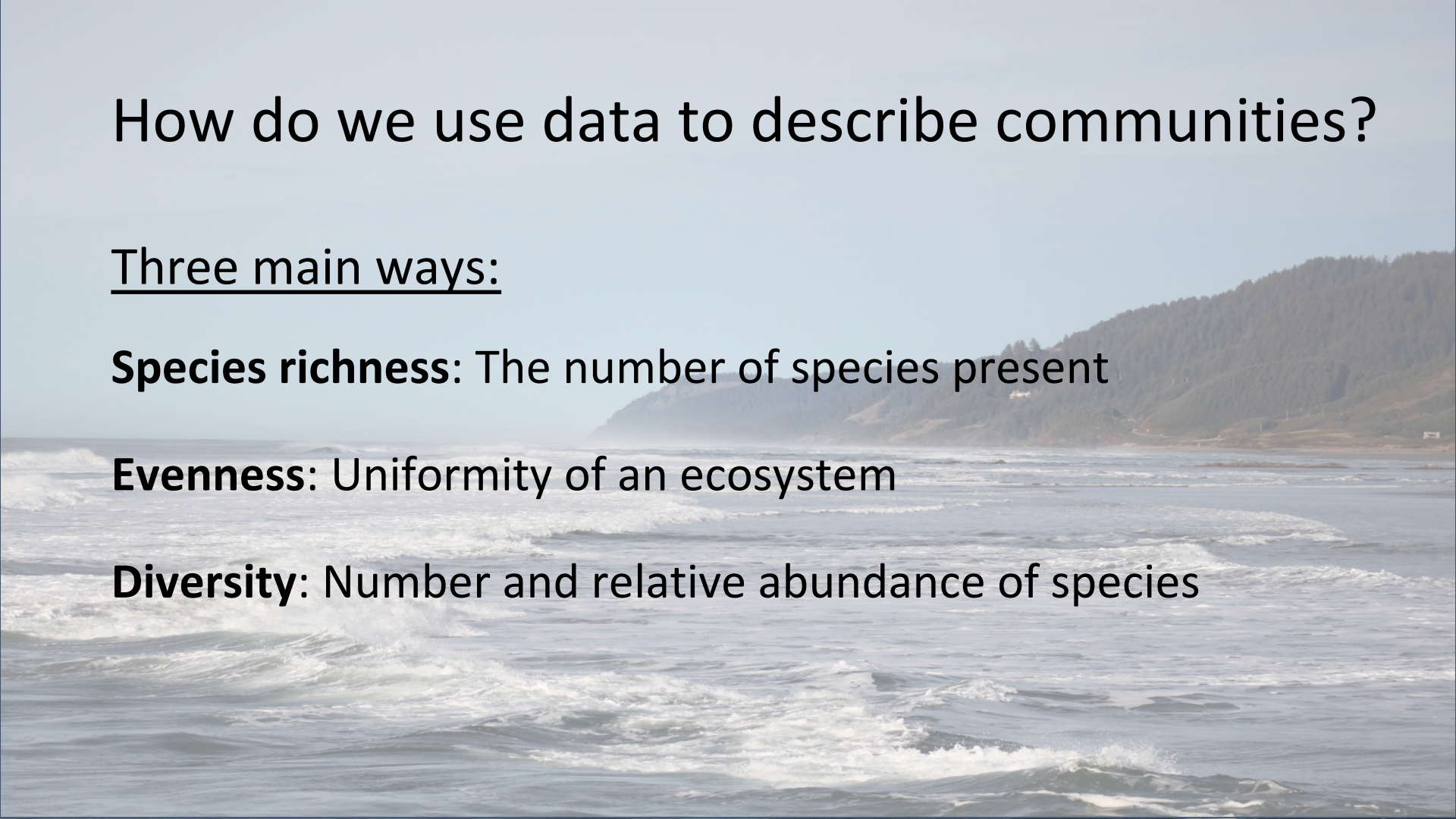
# How do we use data to describe communities?

Three main ways:

**Species richness:** The number of species present

**Evenness:** Uniformity of an ecosystem

**Diversity:** Number and relative abundance of species



The number of different species in one area is called the **species richness**.



If each different color represents a different species of sea star, what is the **species richness**?

The number of different species in one area is called the **species richness**.



Answer: **4!**

Green, purple, pink, and blue

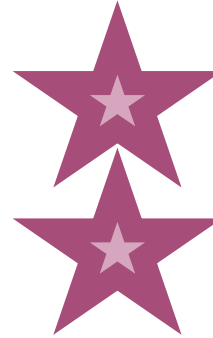
**Species evenness** tells you about the relative abundance of different species.



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2

If all species are equally abundant,  
**evenness** is high.

**Species evenness** tells you about the relative abundance of different species.



If some species are very abundant and others are rare, **evenness** is low.

**Species evenness** tells you about the relative abundance of different species.



Would you say the **evenness** is high, medium, or low?

A **biodiversity index** combines abundance and richness to describe the community.



**Species richness** ÷ number of individuals = simple **biodiversity index**



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Try calculating the **biodiversity** of this group!

A **biodiversity index** combines abundance and richness to describe the community.



**Species richness**  $\div$  number of individuals = simple **biodiversity index**

$$\text{Answer: } 4 \div 10 = 0.4$$