

# Biodiversity Sampling: Exposed vs Sheltered

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01/11/2021

## Hypothesis

We hypothesize that there will be greater biodiversity found in the sheltered site because it experiences less hydrodynamic stress.

## Data Collection

We collected data from both wave-sheltered and an wave-exposed sites, at Scott's Bay, Bamfield. We counted species richness and abundance within ten haphazardly selected 10 cm by 10 cm quadrats along two parallel transect lines per site.

## Analysis

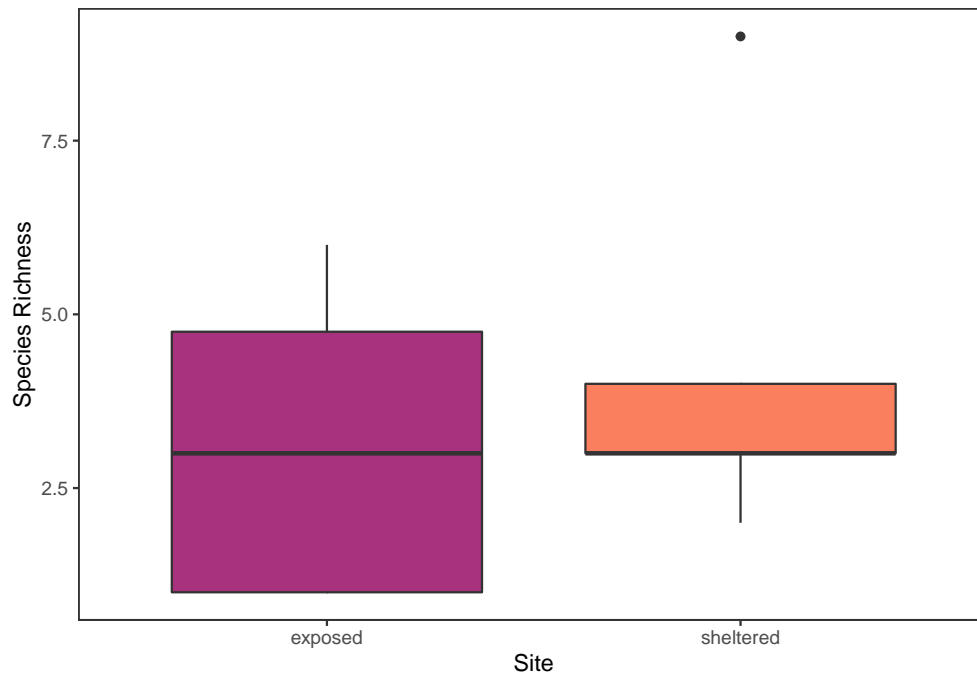
We compared Shannon-Weiner diversity indexes ( $H'$ ), species richness and, species evenness between the exposed and sheltered sites. We ran the statistical analysis ANOVA to determine the significance of our results.

## Results and Conclusions

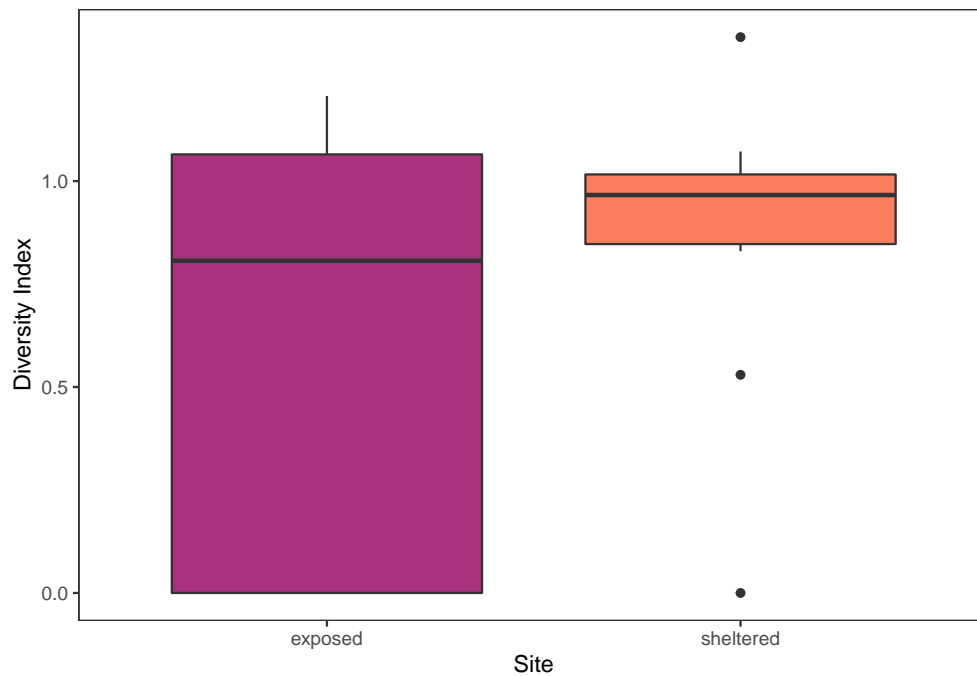
Our analysis found that there was no significant difference between the Shannon-Wiener indexes of the exposed and sheltered sites. The p-value for this Anova test was 0.218. Similarly, the p value of the richness and evenness Anova analysis were 0.43 and 0.78 respectively. In all cases, we cannot reject the null hypothesis that there is no relationship between site location and diversity, richness and evenness (Table 1).

**Table 1:** Species richness evenness and Shannon-Wiener Diversity Index values of the exposed and sheltered sites at Scott's Bay, Bamfield, Canada. Determined using 10 quadrats haphazardly sampled along two parallel transect lines per site.

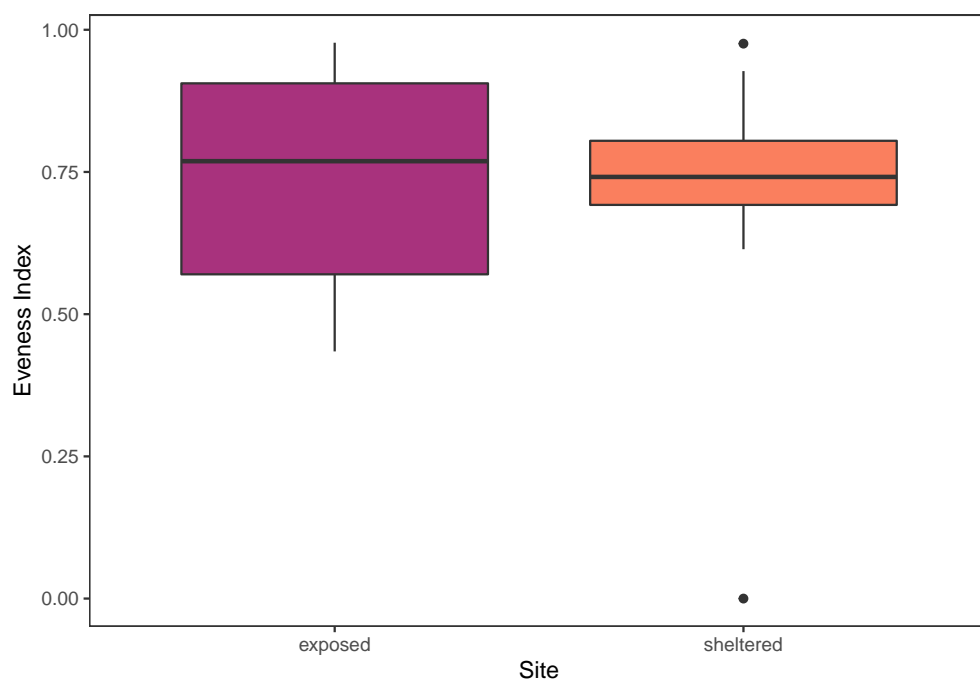
	Value
Shannon-Wiener Diversity ( $H'$ )	0.218
Species Richness	0.430
Species Evenness	0.780



**Figure 1:** Species richness present at the exposed and sheltered sites at Scott's Bay, Bamfield, Canada. Determined using 10 quadrats haphazardly sampled along two parallel transect lines per site.



**Figure 2:**  $H'$  value of Shannon-Wiener Diversity Index present at the exposed and sheltered sites at Scott's Bay, Bamfield, Canada. Determined using 10 quadrats haphazardly sampled along two parallel transect lines per site.



**Figure 3:** Diversity evenness values of the exposed and sheltered sites at Scott's Bay, Bamfield, Canada. Determined using 10 quadrats haphazardly sampled along two parallel transect lines per site.