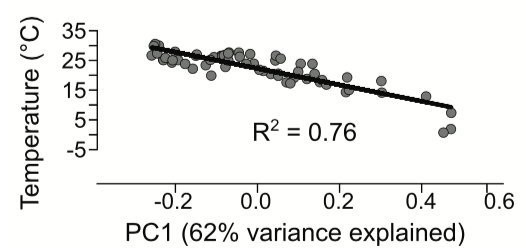
Lab 8

# Question

In the paper “Structure and function of the global ocean microbiome,” Sunagawa et al. found that overall variability in a community (as measured by principle component analysis) was best explained by temperate. (Sunagawa et al., 2015)



Item . The Figure 5a from the Sunagawa et al. paper.

Thus, one question might be**: is there is greater species richness and species diversity (as measured by Shannon-Weiner Index) in warmer water samples (15-30 °C) than in colder water samples (0-10 °C).**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Category | Run ID | Region | Sample details | Temp (°C) |
| Cold | ERR599008 | Southern Ocean (near Antarctica) | mesopelagic zone | 0.45883 |
| Cold | ERR599090 | Southern Ocean (near Antarctica) | surface water layer | 0.67108 |
| Cold | ERR598980 | North Pacific | mesopelagic zone | 6.689724 |
| Cold | ERR598999 | South Pacific (near the Marquesas) | mesopelagic zone | 7.212238 |
| Warm | ERR598995 | North Pacific | deep chlorophyll maximum layer | 15.284298 |
| Warm | ERR598948 | South Pacific (near the Marquesas) | deep chlorophyll maximum layer | 24.69625 |
| Warm | ERR599142 | North Pacific | surface water layer | 25.173925 |
| Warm | ERR598992 | South Pacific (near the Marquesas) | surface water layer | 26.54413 |