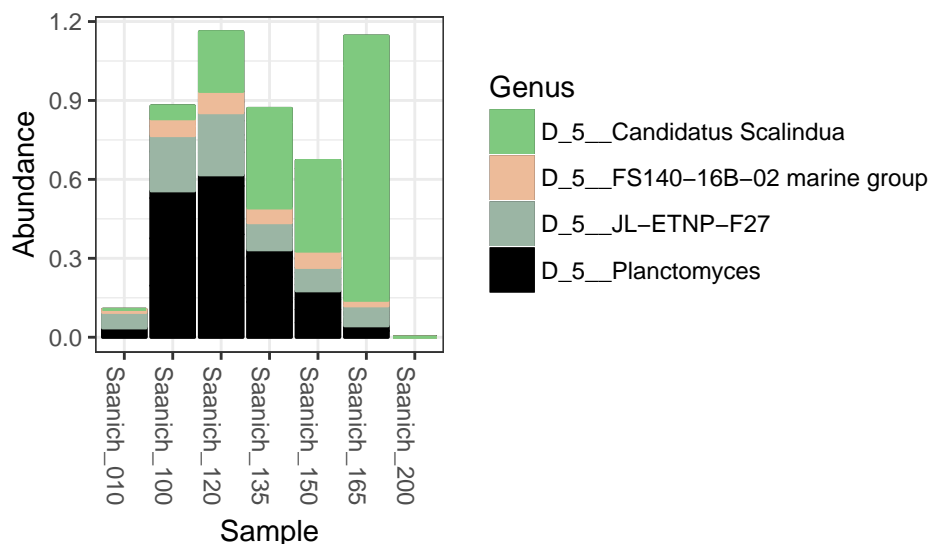**Mothur**

QIIME2

Figure 5: Genus distribution of Planctomycetes across samples

A general linear model was used to investigate the correlation of *Planctomyces*' abundance as a function of depth and/or oxygen concentration. From Table 2, it can be inferred that the abundance of *Planctomyces* had no relationship with varying depths nor oxygen concentration. The p-values, which were above the 5% arbitrary cut-off, also suggested that differences in abundance of *Planctomyces* with respect to depth and oxygen concentration did not differ significantly. These results were consistent with either data sets derived from Mothur and QIIME2.

```
otu_stats <- data.frame()
lmMTaxa1 <- workingMTaxa %>% tax_glom(taxrank = "Genus") %>%
    psmelt() %>% lm(Abundance ~ Depth_m, .) %>% summary()
lmMTaxa2 <- workingMTaxa %>% tax_glom(taxrank = "Genus") %>%
    psmelt() %>% lm(Abundance ~ O2_uM, .) %>% summary()
lmQTaxa1 <- workingQTaxa %>% tax_glom(taxrank = "Genus") %>%
```