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Bio A455

Amplicon Sequencing

**Introduction**

Often, biologists want to be able to plot many organisms together on a graph by

This assignment is an exercise in that.

**Methods**

To demultiplex, perform quality control on and sort the data taxonomically, I used QIIME2 within the conda environment on BASH (CITE). The demux QIIME2 plugin (CITE) was used to demultiplex the data. To perform quality control the resulting sequences, I used the dada2 QIIME2 plugin (CITE). To sort the demultiplexed into operational taxonomic units (OTUs), the feature-classifier plugin QIIME2 plugin (CITE). To represent the results graphically, R was used (CITE). The R vegan package (CITE) was used to create a nonmetric multidimensional scaling (NMS) plot using the OTU table data created from the feature-classifier plugin.

**ResultsChart, scatter chart

Description automatically generated**

#SampleID BarcodeSequence LinkerPrimerSequence Description

DrtyS.5 CTGCTAACGCAA CCGGACTACHVGGGTWTCTAAT hot spring

JMQL.W TTAGGGCTCGTA CCGGACTACHVGGGTWTCTAAT hot spring

DrtyS.5.4.30pm TCTAGCGTAGTG CCGGACTACHVGGGTWTCTAAT hot spring

DrtyS.5.W TCGAGGACTGCA CCGGACTACHVGGGTWTCTAAT hot spring

07DrtyS.4 CGGAGCTATGGT CCGGACTACHVGGGTWTCTAAT hot spring

07DrtyS.5.9am AAGAGATGTCGA CCGGACTACHVGGGTWTCTAAT hot spring

07DrtyS.5.3pm TCCAAAGTGTTC CCGGACTACHVGGGTWTCTAAT hot spring

GXS.W.1 ACGTGTACCCAA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.2 AAGGAGCGCCTT CCGGACTACHVGGGTWTCTAAT wall

GXS.W.3 CGATCCGTATTA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.4 GTCTAATTCCGA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.5 TCCGAATTCACA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.6 ACGCCACGAATG CCGGACTACHVGGGTWTCTAAT wall

GXS.W.7 GGCCACGTAGTA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.8 TAGGAACTGGCC CCGGACTACHVGGGTWTCTAAT wall

GXS.W.9 CTAGCGAACATC CCGGACTACHVGGGTWTCTAAT wall

GXS.W.10 GACAGGAGATAG CCGGACTACHVGGGTWTCTAAT wall

GXS.W.11 ATTCCTGTGAGT CCGGACTACHVGGGTWTCTAAT wall

GXS.W.12 GAGGCTCATCAT CCGGACTACHVGGGTWTCTAAT wall

GXS.W.14 CTATTTGCGACA CCGGACTACHVGGGTWTCTAAT wall

GXS.W.15 AGTAGAGGGATG CCGGACTACHVGGGTWTCTAAT wall

GMQS.W GGTGTCTATTGT CCGGACTACHVGGGTWTCTAAT hot spring

HMZFJ1.W GTCAATTGACCG CCGGACTACHVGGGTWTCTAAT hot spring

HtJ.L.W GCACGACAACAC CCGGACTACHVGGGTWTCTAAT hot spring

JZ.W GTCATATCGTAC CCGGACTACHVGGGTWTCTAAT hot spring

ZZQ.R ACATTCAGCGCA CCGGACTACHVGGGTWTCTAAT hot spring

GP TACGTCCCGTTC CCGGACTACHVGGGTWTCTAAT Rusticle\_ship

AL AAGCCTACACGT CCGGACTACHVGGGTWTCTAAT Rusticle\_ship

A CTGTAGGAGACC CCGGACTACHVGGGTWTCTAAT Rusticle\_ship

rust.A1 TGTTTGAGCTGT CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.A2 ATGGATACGCTC CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.A3 CCATTCGCCCAT CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.B1 TACCCAGAGATC CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.B2 ACCCGTATGATG CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.B3 CCATAATCCGTA CCGGACTACHVGGGTWTCTAAT Rusticle\_key west

rust.T1 TGAGTTCGCTAT CCGGACTACHVGGGTWTCTAAT Rusticle\_flow cell

rust.T2 CACACAGCGTTA CCGGACTACHVGGGTWTCTAAT Rusticle\_flow cell

rust.T3 TCGAGTTTGGTT CCGGACTACHVGGGTWTCTAAT Rusticle\_flow cell

rust.T4 TTACGAGACGGC CCGGACTACHVGGGTWTCTAAT Rusticle\_flow cell

**References**