**Redundancy Analysis (RDA) – Bacterial Data**

Call:

rda(formula = data ~ Ave..Temp + Max.Temp + Rainfall, data = ENV[1:5])

Partitioning of variance:

Inertia Proportion

Total 0.8967 1.0000

Constrained 0.3621 0.4038

Unconstrained 0.5347 0.5962

Eigenvalues, and their contribution to the variance

Importance of components:

RDA1 RDA2 RDA3 PC1 PC2 PC3 PC4

Eigenvalue 0.1676 0.1154 0.07915 0.09232 0.09091 0.09037 0.08809

Proportion Explained 0.1869 0.1286 0.08827 0.10295 0.10138 0.10078 0.09824

Cumulative Proportion 0.1869 0.3155 0.40377 0.50672 0.60809 0.70888 0.80711

PC5 PC6 PC7 PC8

Eigenvalue 0.07015 0.04574 0.03299 0.02408

Proportion Explained 0.07823 0.05101 0.03679 0.02686

Cumulative Proportion 0.88534 0.93635 0.97314 1.00000

Accumulated constrained eigenvalues

Importance of components:

RDA1 RDA2 RDA3

Eigenvalue 0.1676 0.1154 0.07915

Proportion Explained 0.4628 0.3186 0.21861

Cumulative Proportion 0.4628 0.7814 1.00000

Site scores (weighted sums of species scores)

RDA1 RDA2 RDA3 PC1 PC2 PC3

NBFM12Ab -0.7062 0.32114 -0.37414 0.0164997 3.163e-17 -0.433032

NBFM12Bb -0.6921 0.38982 -0.40983 0.0139388 2.279e-16 -0.271565

OBYR16b -0.6349 0.12107 0.27221 -0.0005625 -6.602e-16 -0.514829

OBYR17b 0.5364 -0.03643 -1.52136 -0.0163483 -2.113e-16 0.298014

OBYR19b -0.7032 0.35045 0.30592 -0.0235446 7.267e-17 0.765156

OBYR20Ab 0.5317 0.36510 0.32267 -0.8826587 -1.253e+00 -0.048050

OBYR20Bb 0.5404 0.37381 0.33270 0.8889596 4.221e-14 -0.007672

OBYR20Cb 0.5404 0.37381 0.33270 0.8889596 8.769e-15 -0.007672

OBYR20Db 0.5317 0.36510 0.32267 -0.8826587 1.253e+00 -0.048050

OBYR21Ab 0.2026 -0.99304 -0.04201 -0.0187653 4.305e-16 0.803628

OBYR21Bb -0.3586 -0.59925 0.19173 0.0201381 -5.533e-16 -1.024926

OBYR21Cb 0.2116 -1.03159 0.26675 -0.0039575 3.658e-16 0.488996

Site constraints (linear combinations of constraining variables)

RDA1 RDA2 RDA3 PC1 PC2 PC3

NBFM12Ab -0.6487 0.24851 -0.5156 0.0164997 3.163e-17 -0.433032

NBFM12Bb -0.6487 0.24851 -0.5156 0.0139388 2.279e-16 -0.271565

OBYR16b -0.3001 0.01137 0.5137 -0.0005625 -6.602e-16 -0.514829

OBYR17b 0.5336 0.06116 -1.3524 -0.0163483 -2.113e-16 0.298014

OBYR19b -0.9217 0.56334 0.3984 -0.0235446 7.267e-17 0.765156

OBYR20Ab 0.5178 0.35702 0.2819 -0.8826587 -1.253e+00 -0.048050

OBYR20Bb 0.5178 0.35702 0.2819 0.8889596 4.221e-14 -0.007672

OBYR20Cb 0.5178 0.35702 0.2819 0.8889596 8.769e-15 -0.007672

OBYR20Db 0.5178 0.35702 0.2819 -0.8826587 1.253e+00 -0.048050

OBYR21Ab -0.0285 -0.85365 0.1147 -0.0187653 4.305e-16 0.803628

OBYR21Bb -0.0285 -0.85365 0.1147 0.0201381 -5.533e-16 -1.024926

OBYR21Cb -0.0285 -0.85365 0.1147 -0.0039575 3.658e-16 0.488996

Biplot scores for constraining variables

RDA1 RDA2 RDA3 PC1 PC2 PC3

Ave..Temp -0.4999 -0.33801 0.7974 0 0 0

Max.Temp 0.4227 0.78915 0.4456 0 0 0

Rainfall -0.6824 -0.01811 -0.7307 0 0 0

**Constrained correspondence analysis (CCA) – Fungal Data**

Call:

cca(formula = data ~ Min..Temp + Ave..Temp + Max.Temp + Rainfall + Humidity, data = ENV[1:5])

Partitioning of scaled Chi-square:

Inertia Proportion

Total 4.971 1.0000

Constrained 2.838 0.5709

Unconstrained 2.133 0.4291

Eigenvalues, and their contribution to the scaled Chi-square

Importance of components:

CCA1 CCA2 CCA3 CCA4 CCA5 CA1 CA2

Eigenvalue 0.7220 0.6850 0.5808 0.5462 0.30404 0.6216 0.42919

Proportion Explained 0.1453 0.1378 0.1168 0.1099 0.06116 0.1251 0.08634

Cumulative Proportion 0.1453 0.2830 0.3999 0.5098 0.57093 0.6960 0.78232

CA3 CA4 CA5 CA6

Eigenvalue 0.42462 0.35225 0.21119 0.09398

Proportion Explained 0.08542 0.07086 0.04248 0.01891

Cumulative Proportion 0.86775 0.93861 0.98109 1.00000

Accumulated constrained eigenvalues

Importance of components:

CCA1 CCA2 CCA3 CCA4 CCA5

Eigenvalue 0.7220 0.6850 0.5808 0.5462 0.3040

Proportion Explained 0.2544 0.2414 0.2047 0.1924 0.1071

Cumulative Proportion 0.2544 0.4958 0.7004 0.8929 1.0000

Site scores (weighted averages of species scores)

CCA1 CCA2 CCA3 CCA4 CCA5 CA1

NBFM12Af -1.0195 -0.9608 -0.16230 -0.202570 0.08845 -5.736e-02

NBFM12Bf -1.1995 -1.4250 -0.21917 -0.060147 -0.68792 3.152e-02

OBYR16f -0.2688 1.6246 0.02271 0.661004 -1.98737 1.033e-14

OBYR17f 0.8144 0.5824 -1.24113 -3.084599 -0.17103 -4.122e-15

OBYR19f 1.1774 -0.5551 2.62465 -0.511947 -0.25011 -1.217e-14

OBYR20Af 1.5214 -0.3523 -1.07686 1.202286 0.38923 1.706e+00

OBYR20Bf 1.1582 -0.8293 -0.80264 0.881330 -0.02422 -3.677e+00

OBYR20Cf 1.7270 -0.5153 -1.24390 1.253224 0.07558 2.138e+00

OBYR20Df 1.5804 -0.4521 -0.71139 0.626753 0.26311 1.837e-01

OBYR21Af -0.4186 1.3232 0.24934 0.327702 0.68275 8.472e-02

OBYR21Bf -0.9950 -0.1367 0.15901 0.018537 1.73730 -1.214e-01

OBYR21Cf -0.4476 0.3646 0.08049 -0.009226 2.37421 -9.890e-02

Site constraints (linear combinations of constraining variables)

CCA1 CCA2 CCA3 CCA4 CCA5 CA1

NBFM12Af -1.1357 -1.2604 -0.19900 -0.1107 -0.4126 -5.736e-02

NBFM12Bf -1.1357 -1.2604 -0.19900 -0.1107 -0.4126 3.152e-02

OBYR16f -0.2688 1.6246 0.02271 0.6610 -1.9874 1.033e-14

OBYR17f 0.8144 0.5824 -1.24113 -3.0846 -0.1710 -4.122e-15

OBYR19f 1.1774 -0.5551 2.62465 -0.5119 -0.2501 -1.217e-14

OBYR20Af 1.4852 -0.5397 -0.95178 0.9875 0.1786 1.706e+00

OBYR20Bf 1.4852 -0.5397 -0.95178 0.9875 0.1786 -3.677e+00

OBYR20Cf 1.4852 -0.5397 -0.95178 0.9875 0.1786 2.138e+00

OBYR20Df 1.4852 -0.5397 -0.95178 0.9875 0.1786 1.837e-01

OBYR21Af -0.5377 0.8063 0.19073 0.1857 1.2990 8.472e-02

OBYR21Bf -0.5377 0.8063 0.19073 0.1857 1.2990 -1.214e-01

OBYR21Cf -0.5377 0.8063 0.19073 0.1857 1.2990 -9.890e-02

Biplot scores for constraining variables

CCA1 CCA2 CCA3 CCA4 CCA5 CA1

Min..Temp -0.001308 -0.8973 0.15617 -0.0641 -0.40796 0

Ave..Temp -0.166977 0.3332 0.66504 0.6463 0.03343 0

Max.Temp 0.778389 -0.2462 -0.07693 0.3645 -0.44128 0

Rainfall -0.585652 -0.4628 0.17071 -0.6156 -0.18622 0

Humidity -0.314079 0.8091 0.04866 -0.4781 0.12534 0