

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

Call:

```
rda(formula = data ~ Ave..Temp + Max.Temp + Rainfall + Humidity, data  
= ENV[2:5])
```

Partitioning of variance:

	Inertia	Proportion
Total	0.8967	1.0000
Constrained	0.4208	0.4693
Unconstrained	0.4759	0.5307

Eigenvalues, and their contribution to the variance

Importance of components:

	RDA1	RDA2	RDA3	RDA4	PC1	PC2	PC3
Eigenvalue	0.1691	0.1163	0.08748	0.04793	0.09232	0.09091	0.08978
Proportion Explained	0.1886	0.1297	0.09755	0.05345	0.10295	0.10138	0.10012
Cumulative Proportion	0.1886	0.3183	0.41580	0.46925	0.57220	0.67357	0.77369

  

	PC4	PC5	PC6	PC7
Eigenvalue	0.08809	0.0573	0.03342	0.02413
Proportion Explained	0.09824	0.0639	0.03727	0.02690
Cumulative Proportion	0.87193	0.9358	0.97310	1.00000

Accumulated constrained eigenvalues

Importance of components:

	RDA1	RDA2	RDA3	RDA4
Eigenvalue	0.1691	0.1163	0.08748	0.04793
Proportion Explained	0.4018	0.2764	0.20788	0.11391
Cumulative Proportion	0.4018	0.6782	0.88609	1.00000

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Site scores (weighted sums of species scores)

	RDA1	RDA2	RDA3	RDA4	PC1	PC2
NBFM12Ab	-0.6784	0.3604	-0.13078	0.878007	0.0009710	5.491e-17
NBFM12Bb	-0.6629	0.4277	-0.16243	0.918231	0.0005413	3.708e-17
OBYR16b	-0.6565	0.1013	0.02376	-0.966451	0.0019557	1.262e-16
OBYR17b	0.4657	-0.1966	-1.62148	-0.209970	-0.0005100	-5.000e-17
OBYR19b	-0.7127	0.3441	0.08494	-0.808014	-0.0019970	-1.248e-16
OBYR20Ab	0.5487	0.3758	0.26536	-0.019759	0.8860895	-1.253e+00
OBYR20Bb	0.5579	0.3850	0.27405	-0.020864	-0.8861152	-5.344e-14
OBYR20Cb	0.5579	0.3850	0.27405	-0.020864	-0.8861152	-1.858e-13
OBYR20Db	0.5487	0.3758	0.26536	-0.019759	0.8860895	1.253e+00
OBYR21Ab	0.1811	-0.9968	0.03662	0.001357	-0.0021192	-2.012e-16
OBYR21Bb	-0.3594	-0.5667	0.27666	0.047265	0.0026936	8.364e-17
OBYR21Cb	0.2099	-0.9948	0.41387	0.220821	-0.0014840	1.537e-18

Site constraints (linear combinations of constraining variables)

	RDA1	RDA2	RDA3	RDA4	PC1	PC2
NBFM12Ab	-0.57903	0.31729	-0.16634	0.80986	0.0009710	5.491e-17
NBFM12Bb	-0.57903	0.31729	-0.16634	0.80986	0.0005413	3.708e-17
OBYR16b	-0.41947	-0.09716	-0.02728	-1.19475	0.0019557	1.262e-16
OBYR17b	0.40388	-0.14484	-1.60817	-0.15044	-0.0005100	-5.000e-17
OBYR19b	-0.95465	0.54670	0.13707	-0.57490	-0.0019970	-1.248e-16
OBYR20Ab	0.55174	0.38171	0.27004	-0.01881	0.8860895	-1.253e+00
OBYR20Bb	0.55174	0.38171	0.27004	-0.01881	-0.8861152	-5.344e-14
OBYR20Cb	0.55174	0.38171	0.27004	-0.01881	-0.8861152	-1.858e-13

OBYR20Db	0.55174	0.38171	0.27004	-0.01881	0.8860895	1.253e+00
OBYR21Ab	-0.02622	-0.82204	0.25030	0.12521	-0.0021192	-2.012e-16
OBYR21Bb	-0.02622	-0.82204	0.25030	0.12521	0.0026936	8.364e-17
OBYR21Cb	-0.02622	-0.82204	0.25030	0.12521	-0.0014840	1.537e-18

Biplot scores for constraining variables

	RDA1	RDA2	RDA3	RDA4	PC1	PC2
Ave..Temp	-0.4842	-0.27119	0.7793	-0.2909	0	0
Max.Temp	0.4417	0.79270	0.2738	-0.3187	0	0
Rainfall	-0.6935	-0.03839	-0.5958	0.4031	0	0
Humidity	-0.2429	-0.80180	-0.4904	-0.2401	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

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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