

Table S1 – Total abundance post-hoc analyses for linear mixed model using emmeans. Significant values marked in red, and comparisons are ranked by p-value from smallest to largest.

Contrast	Factor 1	Factor 2	estimate	SE	df	z.ratio	p.value
December - January	Top	S	2.71	0.52	63.1	5.24	0.000
Bottom - Top	S	January	2.60	0.57	89.8	4.58	0.000
December - February	Top	S	2.55	0.55	66.9	4.61	0.000
C - S	Bottom	December	-2.25	0.57	89.8	-3.96	0.001
R - S	Top	December	-2.23	0.57	89.8	-3.92	0.001
R - S	Bottom	December	-2.03	0.57	89.8	-3.57	0.003
Bottom - Top	M	January	1.61	0.57	89.8	2.84	0.006
M - S	Top	February	1.96	0.60	91.6	3.27	0.008
C - S	Top	December	-1.76	0.57	89.8	-3.10	0.014
C - S	Top	February	1.80	0.60	91.6	3.00	0.018
Bottom - Top	S	February	1.45	0.60	91.6	2.40	0.018
M - S	Top	December	-1.68	0.57	89.8	-2.96	0.020
C - S	Top	January	1.61	0.57	89.8	2.83	0.029
December - January	Bottom	R	-1.33	0.52	63.1	-2.58	0.032
December - February	Bottom	R	-1.27	0.52	63.1	-2.47	0.043
C - M	Bottom	January	-1.45	0.57	89.8	-2.56	0.057
December - February	Top	R	-1.21	0.52	63.1	-2.33	0.058
R - S	Top	February	1.53	0.60	91.6	2.54	0.060
C - M	Bottom	December	-1.37	0.57	89.8	-2.41	0.082
C - M	Bottom	February	-1.37	0.57	89.8	-2.41	0.083
C - S	Bottom	January	-1.36	0.57	89.8	-2.39	0.087
December - January	Bottom	M	-1.11	0.52	63.1	-2.14	0.090
December - February	Top	M	-1.09	0.52	63.1	-2.11	0.096
December - February	Bottom	C	-1.08	0.52	63.1	-2.08	0.102
December - February	Bottom	M	-1.07	0.52	63.1	-2.08	0.103
February - January	Top	M	1.04	0.52	63.1	2.00	0.119
December - January	Bottom	C	-1.02	0.52	63.1	-1.98	0.126
December - February	Top	C	-1.01	0.52	63.1	-1.96	0.131
February - January	Bottom	S	-1.00	0.52	63.1	-1.93	0.139
R - S	Top	January	1.16	0.57	89.8	2.04	0.183
M - R	Bottom	December	1.15	0.57	89.8	2.03	0.186
Bottom - Top	C	December	-0.73	0.57	89.8	-1.28	0.203
December - February	Bottom	S	0.86	0.52	63.1	1.67	0.224
M - S	Top	January	1.08	0.57	89.8	1.91	0.232
Bottom - Top	C	February	-0.66	0.57	89.8	-1.17	0.245

Contrast	Factor 1	Factor 2	estimate	SE	df	z.ratio	p.value
M - S	Bottom	February	1.06	0.57	89.8	1.87	0.248
Bottom - Top	R	January	0.62	0.57	89.8	1.09	0.280
Bottom - Top	M	December	0.56	0.57	89.8	0.99	0.325
Bottom - Top	M	February	0.54	0.57	89.8	0.96	0.341
M - R	Bottom	February	0.95	0.57	89.8	1.67	0.344
M - R	Bottom	January	0.92	0.57	89.8	1.63	0.368
December - January	Top	R	-0.68	0.52	63.1	-1.31	0.396
December - January	Top	C	-0.66	0.52	63.1	-1.28	0.414
M - S	Bottom	December	-0.88	0.57	89.8	-1.54	0.417
R - S	Bottom	January	-0.83	0.57	89.8	-1.46	0.469
Bottom - Top	C	January	-0.36	0.57	89.8	-0.64	0.523
February - January	Top	R	0.53	0.52	63.1	1.03	0.564
Bottom - Top	S	December	-0.24	0.57	89.8	-0.43	0.671
M - R	Top	December	0.55	0.57	89.8	0.97	0.769
February - January	Top	C	0.35	0.52	63.1	0.68	0.774
C - R	Bottom	January	-0.53	0.57	89.8	-0.93	0.787
C - M	Top	January	0.52	0.57	89.8	0.92	0.793
C - R	Top	December	0.47	0.57	89.8	0.82	0.843
C - R	Top	January	0.45	0.57	89.8	0.79	0.857
M - R	Top	February	0.43	0.57	89.8	0.76	0.870
C - R	Bottom	February	-0.42	0.57	89.8	-0.74	0.882
Bottom - Top	R	December	-0.04	0.57	89.8	-0.07	0.944
C - S	Bottom	February	-0.31	0.57	89.8	-0.54	0.949
February - January	Top	S	0.16	0.55	66.9	0.28	0.957
Bottom - Top	R	February	0.03	0.57	89.8	0.05	0.961
C - R	Top	February	0.27	0.57	89.8	0.48	0.962
December - January	Bottom	S	-0.13	0.52	63.1	-0.26	0.964
C - R	Bottom	December	-0.22	0.57	89.8	-0.39	0.980
C - M	Top	February	-0.16	0.57	89.8	-0.28	0.992
February - January	Bottom	R	-0.06	0.52	63.1	-0.11	0.993
December - January	Top	M	-0.05	0.52	63.1	-0.11	0.994
February - January	Bottom	C	0.05	0.52	63.1	0.10	0.994
R - S	Bottom	February	0.11	0.57	89.8	0.20	0.997
February - January	Bottom	M	-0.03	0.52	63.1	-0.07	0.998
M - S	Bottom	January	0.10	0.57	89.8	0.17	0.998
C - M	Top	December	-0.08	0.57	89.8	-0.14	0.999
M - R	Top	January	-0.07	0.57	89.8	-0.13	0.999

Table S2 – *Fosterygion lapillum* abundance post-hoc analyses for linear mixed model using emmeans. Significant values marked in red, and comparisons are ranked by p-value from smallest to largest.

contrast	Factor 1	Factor 2	estimate	SE	df	t.ratio	p.value
Bottom - Top	S	January	2.63	0.60	85.6	4.40	0.000
December - January	Top	S	2.08	0.52	63.0	3.97	0.001
C - M	Bottom	February	-2.14	0.60	85.6	-3.58	0.003
Bottom - Top	M	January	1.64	0.60	85.6	2.74	0.007
December - February	Top	S	1.75	0.56	66.5	3.11	0.008
Bottom - Top	C	February	-1.52	0.60	85.6	-2.53	0.013
December - January	Bottom	R	-1.51	0.52	63.0	-2.89	0.014
December - February	Top	M	-1.49	0.52	63.0	-2.84	0.016
December - February	Bottom	R	-1.44	0.52	63.0	-2.76	0.020
Bottom - Top	S	February	1.46	0.63	88.5	2.30	0.024
M - S	Top	February	1.75	0.63	88.5	2.76	0.035
C - S	Top	February	1.74	0.63	88.5	2.75	0.035
Bottom - Top	M	December	1.22	0.60	85.6	2.04	0.044
M - S	Top	December	-1.49	0.60	85.6	-2.49	0.069
C - M	Bottom	January	-1.46	0.60	85.6	-2.45	0.076
Bottom - Top	R	January	1.03	0.60	85.6	1.73	0.088
C - S	Top	January	1.42	0.60	85.6	2.37	0.091
R - S	Top	December	-1.38	0.60	85.6	-2.31	0.105
C - M	Bottom	December	-1.37	0.60	85.6	-2.29	0.109
M - R	Bottom	December	1.37	0.60	85.6	2.29	0.109
December - January	Bottom	M	-1.03	0.52	63.0	-1.97	0.127
C - R	Bottom	February	-1.33	0.60	85.6	-2.22	0.127
December - January	Bottom	S	-1.00	0.52	63.0	-1.92	0.142
December - February	Top	C	-0.97	0.52	63.0	-1.86	0.159
C - S	Bottom	January	-1.26	0.60	85.6	-2.10	0.162
C - S	Bottom	February	-1.23	0.60	85.6	-2.06	0.176
December - January	Bottom	C	-0.94	0.52	63.0	-1.80	0.179
M - S	Top	January	1.20	0.60	85.6	2.01	0.194
C - S	Bottom	December	-1.19	0.60	85.6	-1.99	0.200
R - S	Bottom	December	-1.19	0.60	85.6	-1.99	0.200
December - February	Bottom	M	-0.89	0.52	63.0	-1.70	0.215
February - January	Top	M	0.88	0.52	63.0	1.67	0.223
R - S	Top	February	1.21	0.63	88.5	1.91	0.232
February - January	Bottom	S	-0.85	0.52	63.0	-1.62	0.246
December - February	Top	R	-0.84	0.52	63.0	-1.60	0.252

contrast	Factor 1	Factor 2	estimate	SE	df	t.ratio	p.value
February - January	Bottom	C	-0.82	0.52	63.0	-1.57	0.266
Bottom - Top	C	December	-0.66	0.60	85.6	-1.10	0.273
Bottom - Top	M	February	0.62	0.60	85.6	1.04	0.303
C - S	Top	December	-0.98	0.60	85.6	-1.64	0.364
R - S	Top	January	0.92	0.60	85.6	1.54	0.421
February - January	Top	C	0.66	0.52	63.0	1.25	0.427
M - S	Bottom	February	0.91	0.60	85.6	1.52	0.431
M - R	Bottom	January	0.89	0.60	85.6	1.49	0.450
Bottom - Top	S	December	-0.45	0.60	85.6	-0.75	0.455
February - January	Top	R	0.62	0.52	63.0	1.18	0.468
December - January	Top	M	-0.61	0.52	63.0	-1.17	0.476
M - R	Bottom	February	0.81	0.60	85.6	1.36	0.528
Bottom - Top	R	February	0.35	0.60	85.6	0.58	0.566
Bottom - Top	R	December	-0.26	0.60	85.6	-0.43	0.665
R - S	Bottom	January	-0.68	0.60	85.6	-1.14	0.667
C - R	Bottom	January	-0.57	0.60	85.6	-0.96	0.774
M - R	Top	February	0.54	0.60	85.6	0.90	0.805
C - R	Top	February	0.53	0.60	85.6	0.89	0.808
December - January	Top	C	-0.32	0.52	63.0	-0.61	0.817
February - January	Top	S	0.33	0.56	66.5	0.59	0.827
C - M	Top	December	0.51	0.60	85.6	0.85	0.828
C - R	Top	January	0.50	0.60	85.6	0.83	0.839
December - January	Top	R	-0.22	0.52	63.0	-0.42	0.908
C - R	Top	December	0.40	0.60	85.6	0.67	0.908
Bottom - Top	C	January	-0.04	0.60	85.6	-0.06	0.949
December - February	Bottom	S	-0.16	0.52	63.0	-0.30	0.951
February - January	Bottom	M	-0.15	0.52	63.0	-0.28	0.958
M - R	Top	January	0.28	0.60	85.6	0.47	0.965
December - February	Bottom	C	-0.12	0.52	63.0	-0.22	0.973
C - M	Top	January	0.22	0.60	85.6	0.36	0.984
M - S	Bottom	January	0.21	0.60	85.6	0.35	0.985
February - January	Bottom	R	-0.07	0.52	63.0	-0.13	0.990
M - S	Bottom	December	0.18	0.60	85.6	0.30	0.991
M - R	Top	December	-0.11	0.60	85.6	-0.18	0.998
R - S	Bottom	February	0.10	0.60	85.6	0.16	0.999
C - M	Top	February	0.00	0.60	85.6	-0.01	1.000
C - R	Bottom	December	0.00	0.60	85.6	0.00	1.000

Table S3 – Shannon-Wiener diversity index post-hoc analyses for a Kruskal-Wallis model. Significant values marked in red, and comparisons are ranked by p-value from smallest to largest.

Comparison	Chi Square	Z-value	P-value	P-value adjusted
C.December.Bottom - M.February.Top	44.94	-3.18	0.001	0.034
M.December.Bottom - M.February.Top	44.94	-3.18	0.001	0.041
M.December.Top - M.February.Top	44.94	-3.18	0.001	0.051
M.February.Top - S.February.Top	44.94	3.00	0.001	0.054
C.December.Bottom - M.February.Bottom	44.94	-2.75	0.003	0.063
M.February.Top - R.December.Bottom	44.94	3.18	0.001	0.068
M.December.Bottom - M.February.Bottom	44.94	-2.75	0.003	0.069
M.December.Top - M.February.Bottom	44.94	-2.75	0.003	0.075
M.February.Top - S.February.Bottom	44.94	2.66	0.004	0.076
C.December.Bottom - S.December.Top	44.94	-2.49	0.006	0.076
C.December.Top - M.February.Top	44.94	-2.47	0.007	0.078
M.December.Bottom - S.December.Top	44.94	-2.49	0.006	0.080
M.February.Bottom - S.February.Top	44.94	2.59	0.005	0.082
M.February.Bottom - R.December.Bottom	44.94	2.75	0.003	0.082
M.December.Top - S.December.Top	44.94	-2.49	0.006	0.084
M.February.Top - R.January.Bottom	44.94	2.60	0.005	0.086
R.December.Bottom - S.December.Top	44.94	-2.49	0.006	0.088
M.February.Top - R.February.Bottom	44.94	2.53	0.006	0.091
M.February.Bottom - R.December.Top	44.94	2.75	0.003	0.092
R.December.Top - S.December.Top	44.94	-2.49	0.006	0.092
C.December.Bottom - R.February.Top	44.94	-2.29	0.011	0.096
M.February.Top - M.January.Top	44.94	2.38	0.009	0.096
S.December.Top - S.January.Top	44.94	2.49	0.006	0.098
M.December.Bottom - R.February.Top	44.94	-2.29	0.011	0.099
S.December.Top - S.February.Top	44.94	2.35	0.009	0.100
M.December.Top - R.February.Top	44.94	-2.29	0.011	0.102
M.February.Top - R.December.Top	44.94	3.18	0.001	0.102
M.February.Bottom - S.January.Top	44.94	2.75	0.003	0.103
R.December.Bottom - R.February.Top	44.94	-2.29	0.011	0.106
M.February.Bottom - S.February.Bottom	44.94	2.23	0.013	0.107
R.December.Top - R.February.Top	44.94	-2.29	0.011	0.109
R.February.Top - S.January.Top	44.94	2.29	0.011	0.113
M.February.Bottom - R.January.Bottom	44.94	2.17	0.015	0.122
R.February.Top - S.February.Top	44.94	2.16	0.016	0.122
C.December.Bottom - C.January.Top	44.94	-1.97	0.024	0.132
C.December.Top - M.February.Bottom	44.94	-2.04	0.021	0.133
C.December.Bottom - C.February.Bottom	44.94	-2.05	0.020	0.134
C.January.Top - M.December.Bottom	44.94	1.97	0.024	0.135

Comparison	Chi Square	Z-value	P-value	P-value adjusted
M.February.Bottom - R.February.Bottom	44.94	2.10	0.018	0.135
M.February.Bottom - M.January.Top	44.94	1.95	0.026	0.136
C.February.Bottom - M.December.Bottom	44.94	2.05	0.020	0.137
C.January.Top - M.December.Top	44.94	1.97	0.024	0.137
C.February.Bottom - S.February.Top	44.94	1.93	0.027	0.140
C.January.Top - R.December.Bottom	44.94	1.97	0.024	0.140
C.February.Bottom - M.December.Top	44.94	2.05	0.020	0.141
R.January.Bottom - S.December.Top	44.94	-1.91	0.028	0.143
C.January.Top - R.December.Top	44.94	1.97	0.024	0.143
C.January.Bottom - M.February.Top	44.94	-2.00	0.023	0.144
C.February.Bottom - R.December.Bottom	44.94	2.05	0.020	0.144
C.January.Top - S.January.Top	44.94	1.97	0.024	0.146
C.December.Bottom - S.January.Bottom	44.94	-1.83	0.034	0.147
C.February.Top - M.February.Top	44.94	-1.89	0.029	0.147
S.December.Top - S.February.Bottom	44.94	1.98	0.024	0.148
C.February.Bottom - R.December.Top	44.94	2.05	0.020	0.148
M.December.Bottom - S.January.Bottom	44.94	-1.83	0.034	0.149
M.December.Top - S.January.Bottom	44.94	-1.83	0.034	0.152
C.February.Bottom - S.January.Top	44.94	2.05	0.020	0.152
R.December.Bottom - S.January.Bottom	44.94	-1.83	0.034	0.154
C.January.Top - S.February.Top	44.94	1.86	0.032	0.156
R.February.Bottom - S.December.Top	44.94	-1.85	0.032	0.157
R.December.Top - S.January.Bottom	44.94	-1.83	0.034	0.157
S.January.Bottom - S.January.Top	44.94	1.83	0.034	0.160
C.December.Top - S.December.Top	44.94	-1.78	0.037	0.161
R.February.Top - S.February.Bottom	44.94	1.77	0.038	0.162
M.February.Top - R.January.Top	44.94	1.76	0.039	0.164
M.January.Top - S.December.Top	44.94	-1.69	0.045	0.165
C.December.Bottom - M.January.Bottom	44.94	-1.70	0.045	0.165
M.December.Bottom - M.January.Bottom	44.94	-1.70	0.045	0.167
M.December.Top - M.January.Bottom	44.94	-1.70	0.045	0.170
S.February.Top - S.January.Bottom	44.94	-1.73	0.042	0.171
M.January.Bottom - R.December.Bottom	44.94	1.70	0.045	0.172
M.February.Top - S.December.Bottom	44.94	1.73	0.042	0.173
M.January.Bottom - R.December.Top	44.94	1.70	0.045	0.174
R.February.Top - R.January.Bottom	44.94	1.71	0.044	0.175
M.January.Bottom - S.January.Top	44.94	1.70	0.045	0.177
R.February.Bottom - R.February.Top	44.94	-1.64	0.050	0.180
M.January.Bottom - S.February.Top	44.94	1.60	0.055	0.194
C.December.Top - R.February.Top	44.94	-1.58	0.057	0.200

Comparison	Chi Square	Z-value	P-value	P-value adjusted
C.January.Bottom - M.February.Bottom	44.94	-1.57	0.058	0.202
M.February.Top - S.January.Top	44.94	3.18	0.001	0.204
C.February.Bottom - S.February.Bottom	44.94	1.53	0.063	0.215
C.December.Bottom - R.January.Top	44.94	-1.42	0.078	0.220
C.December.Bottom - S.December.Bottom	44.94	-1.45	0.074	0.221
M.December.Bottom - R.January.Top	44.94	-1.42	0.078	0.222
M.December.Bottom - S.December.Bottom	44.94	-1.45	0.074	0.223
C.February.Bottom - R.February.Bottom	44.94	1.40	0.081	0.225
M.December.Top - R.January.Top	44.94	-1.42	0.078	0.225
M.December.Top - S.December.Bottom	44.94	-1.45	0.074	0.226
C.January.Top - R.January.Bottom	44.94	1.39	0.082	0.227
R.December.Bottom - R.January.Top	44.94	-1.42	0.078	0.227
R.December.Bottom - S.December.Bottom	44.94	-1.45	0.074	0.228
R.December.Top - R.January.Top	44.94	-1.42	0.078	0.229
M.February.Top - M.January.Bottom	44.94	1.48	0.069	0.230
M.January.Top - R.February.Top	44.94	-1.49	0.068	0.230
R.December.Top - S.December.Bottom	44.94	-1.45	0.074	0.231
R.January.Top - S.January.Top	44.94	1.42	0.078	0.232
S.December.Bottom - S.January.Top	44.94	1.45	0.074	0.233
C.January.Top - S.February.Bottom	44.94	1.46	0.073	0.234
C.February.Top - M.February.Bottom	44.94	-1.46	0.072	0.234
C.February.Bottom - R.January.Bottom	44.94	1.47	0.071	0.234
S.December.Bottom - S.February.Top	44.94	1.37	0.086	0.235
C.December.Bottom - C.February.Top	44.94	-1.29	0.099	0.237
C.February.Top - M.December.Bottom	44.94	1.29	0.099	0.239
M.February.Top - S.January.Bottom	44.94	1.35	0.089	0.240
M.February.Bottom - R.January.Top	44.94	1.33	0.091	0.240
C.January.Top - R.February.Bottom	44.94	1.33	0.092	0.241
R.January.Top - S.February.Top	44.94	1.34	0.091	0.241
C.February.Top - M.December.Top	44.94	1.29	0.099	0.241
C.December.Top - C.February.Bottom	44.94	-1.34	0.091	0.243
S.February.Bottom - S.January.Bottom	44.94	-1.32	0.094	0.243
C.January.Bottom - S.December.Top	44.94	-1.31	0.095	0.243
C.February.Top - R.December.Bottom	44.94	1.29	0.099	0.243
M.February.Bottom - S.December.Bottom	44.94	1.30	0.097	0.245
C.February.Top - R.December.Top	44.94	1.29	0.099	0.246
C.December.Top - C.January.Top	44.94	-1.26	0.104	0.246
C.February.Top - S.January.Top	44.94	1.29	0.099	0.248
R.January.Bottom - S.January.Bottom	44.94	-1.25	0.105	0.249
C.February.Bottom - M.January.Top	44.94	1.25	0.106	0.249

Comparison	Chi Square	Z-value	P-value	P-value adjusted
M.January.Bottom - S.February.Bottom	44.94	1.18	0.119	0.254
C.December.Bottom - C.January.Bottom	44.94	-1.18	0.119	0.256
C.January.Top - M.January.Top	44.94	1.17	0.121	0.257
C.January.Bottom - M.December.Bottom	44.94	1.18	0.119	0.258
C.January.Bottom - M.December.Top	44.94	1.18	0.119	0.260
C.February.Top - S.February.Top	44.94	1.21	0.112	0.260
C.January.Top - M.February.Top	44.94	-1.21	0.113	0.261
C.February.Top - S.December.Top	44.94	-1.20	0.115	0.261
C.January.Bottom - R.December.Bottom	44.94	1.18	0.119	0.262
C.January.Bottom - R.December.Top	44.94	1.18	0.119	0.264
R.February.Bottom - S.January.Bottom	44.94	-1.19	0.118	0.266
C.January.Bottom - S.January.Top	44.94	1.18	0.119	0.266
C.February.Bottom - M.February.Top	44.94	-1.13	0.129	0.271
C.January.Bottom - S.February.Top	44.94	1.11	0.133	0.273
C.December.Top - S.January.Bottom	44.94	-1.12	0.131	0.274
M.January.Bottom - R.January.Bottom	44.94	1.12	0.132	0.274
C.January.Bottom - R.February.Top	44.94	-1.11	0.134	0.275
R.January.Top - S.December.Top	44.94	-1.07	0.141	0.287
M.January.Bottom - R.February.Bottom	44.94	1.05	0.146	0.293
M.February.Bottom - M.January.Bottom	44.94	1.05	0.146	0.295
S.December.Bottom - S.December.Top	44.94	-1.04	0.149	0.295
M.January.Top - S.January.Bottom	44.94	-1.03	0.151	0.298
C.February.Top - R.February.Top	44.94	-1.00	0.159	0.311
C.December.Top - M.January.Bottom	44.94	-0.99	0.162	0.314
S.December.Bottom - S.February.Bottom	44.94	0.93	0.175	0.338
M.February.Bottom - S.January.Bottom	44.94	0.92	0.179	0.344
R.January.Top - S.February.Bottom	44.94	0.90	0.184	0.349
M.January.Bottom - M.January.Top	44.94	0.90	0.185	0.350
M.February.Top - R.February.Top	44.94	0.89	0.186	0.350
R.February.Top - R.January.Top	44.94	0.87	0.192	0.356
C.February.Bottom - C.January.Bottom	44.94	0.86	0.194	0.356
R.January.Bottom - S.December.Bottom	44.94	-0.87	0.192	0.358
R.February.Top - S.December.Bottom	44.94	0.84	0.201	0.365
R.January.Bottom - R.January.Top	44.94	-0.84	0.201	0.368
C.December.Bottom - M.January.Top	44.94	-0.80	0.212	0.368
M.January.Bottom - S.December.Top	44.94	-0.79	0.213	0.368
C.January.Bottom - C.January.Top	44.94	-0.79	0.215	0.369
C.February.Top - S.February.Bottom	44.94	0.77	0.220	0.370
M.December.Bottom - M.January.Top	44.94	-0.80	0.212	0.370
C.January.Top - M.February.Bottom	44.94	-0.78	0.218	0.372

Comparison	Chi Square	Z-value	P-value	P-value adjusted
R.February.Bottom - R.January.Top	44.94	-0.77	0.220	0.372
M.December.Top - M.January.Top	44.94	-0.80	0.212	0.372
M.January.Top - S.February.Top	44.94	0.75	0.225	0.375
M.January.Top - R.December.Bottom	44.94	0.80	0.212	0.375
C.February.Bottom - C.February.Top	44.94	0.76	0.224	0.376
M.January.Top - R.December.Top	44.94	0.80	0.212	0.377
C.December.Bottom - R.February.Bottom	44.94	-0.64	0.260	0.377
C.December.Bottom - C.December.Top	44.94	-0.71	0.239	0.377
C.February.Bottom - M.February.Bottom	44.94	-0.70	0.241	0.378
C.December.Top - S.December.Bottom	44.94	-0.74	0.229	0.379
C.February.Top - R.February.Bottom	44.94	0.64	0.260	0.379
R.February.Bottom - S.December.Bottom	44.94	-0.81	0.210	0.379
C.December.Top - M.December.Bottom	44.94	0.71	0.239	0.379
M.January.Top - S.January.Top	44.94	0.80	0.212	0.380
M.December.Bottom - R.February.Bottom	44.94	-0.64	0.260	0.381
C.December.Top - M.December.Top	44.94	0.71	0.239	0.382
C.December.Top - C.February.Top	44.94	-0.58	0.281	0.382
C.February.Bottom - R.January.Top	44.94	0.63	0.265	0.383
M.December.Top - R.February.Bottom	44.94	-0.64	0.260	0.383
M.February.Top - S.December.Top	44.94	0.69	0.246	0.384
C.December.Top - R.December.Bottom	44.94	0.71	0.239	0.384
C.December.Bottom - R.January.Bottom	44.94	-0.58	0.281	0.384
C.February.Top - C.January.Top	44.94	-0.68	0.248	0.384
R.December.Bottom - R.February.Bottom	44.94	-0.64	0.260	0.385
M.December.Bottom - R.January.Bottom	44.94	-0.58	0.281	0.386
M.January.Top - R.January.Top	44.94	-0.62	0.268	0.386
C.December.Top - R.December.Top	44.94	0.71	0.239	0.386
C.January.Bottom - M.January.Bottom	44.94	-0.52	0.303	0.387
R.December.Top - R.February.Bottom	44.94	-0.64	0.260	0.387
C.January.Bottom - S.February.Bottom	44.94	0.67	0.253	0.388
M.December.Top - R.January.Bottom	44.94	-0.58	0.281	0.388
S.December.Top - S.January.Bottom	44.94	0.66	0.254	0.388
C.February.Top - R.January.Bottom	44.94	0.71	0.239	0.388
C.December.Top - S.February.Top	44.94	0.67	0.252	0.389
R.February.Bottom - S.February.Top	44.94	0.61	0.272	0.389
C.January.Bottom - S.January.Bottom	44.94	-0.65	0.258	0.389
C.December.Bottom - S.February.Bottom	44.94	-0.52	0.303	0.389
R.February.Bottom - S.January.Top	44.94	0.64	0.260	0.390
C.January.Bottom - R.January.Bottom	44.94	0.60	0.274	0.390
R.December.Bottom - R.January.Bottom	44.94	-0.58	0.281	0.390

Comparison	Chi Square	Z-value	P-value	P-value adjusted
C.February.Bottom - S.December.Bottom	44.94	0.60	0.276	0.390
M.January.Bottom - R.February.Top	44.94	-0.59	0.277	0.391
C.December.Top - R.January.Top	44.94	-0.71	0.239	0.391
M.December.Bottom - S.February.Bottom	44.94	-0.52	0.303	0.391
M.January.Top - S.December.Bottom	44.94	-0.65	0.258	0.391
R.December.Top - R.January.Bottom	44.94	-0.58	0.281	0.392
C.January.Top - R.January.Top	44.94	0.55	0.290	0.393
M.December.Top - S.February.Bottom	44.94	-0.52	0.303	0.393
C.December.Top - S.January.Top	44.94	0.71	0.239	0.393
R.January.Bottom - S.February.Top	44.94	0.55	0.292	0.394
C.February.Top - S.January.Bottom	44.94	-0.54	0.294	0.394
R.January.Bottom - S.January.Top	44.94	0.58	0.281	0.394
C.January.Bottom - R.February.Bottom	44.94	0.54	0.296	0.394
R.December.Bottom - S.February.Bottom	44.94	-0.52	0.303	0.395
R.December.Top - S.February.Bottom	44.94	-0.52	0.303	0.396
S.February.Bottom - S.February.Top	44.94	0.49	0.313	0.397
C.February.Top - M.January.Top	44.94	0.49	0.313	0.398
C.January.Top - S.December.Bottom	44.94	0.52	0.301	0.398
S.February.Bottom - S.January.Top	44.94	0.52	0.303	0.398
C.January.Top - S.December.Top	44.94	-0.52	0.301	0.400
C.December.Top - C.January.Bottom	44.94	-0.47	0.318	0.401
M.February.Bottom - R.February.Top	44.94	0.46	0.322	0.404
R.February.Top - S.January.Bottom	44.94	0.46	0.324	0.405
C.February.Bottom - S.December.Top	44.94	-0.45	0.328	0.408
M.February.Bottom - M.February.Top	44.94	-0.43	0.334	0.413
R.January.Top - S.January.Bottom	44.94	-0.41	0.340	0.418
C.February.Top - M.January.Bottom	44.94	-0.41	0.342	0.419
S.December.Bottom - S.January.Bottom	44.94	-0.38	0.352	0.427
C.January.Bottom - M.January.Top	44.94	0.38	0.352	0.429
C.February.Bottom - M.January.Bottom	44.94	0.35	0.364	0.440
C.January.Top - R.February.Top	44.94	-0.32	0.376	0.453
M.January.Top - S.February.Bottom	44.94	0.28	0.388	0.466
M.January.Bottom - R.January.Top	44.94	0.28	0.390	0.466
C.January.Top - M.January.Bottom	44.94	0.27	0.392	0.466
C.January.Bottom - S.December.Bottom	44.94	-0.27	0.394	0.467
M.February.Bottom - S.December.Top	44.94	0.26	0.398	0.470
M.January.Bottom - S.December.Bottom	44.94	0.25	0.402	0.473
C.February.Bottom - R.February.Top	44.94	-0.24	0.405	0.473
C.January.Bottom - R.January.Top	44.94	-0.24	0.407	0.474
M.January.Top - R.January.Bottom	44.94	0.22	0.413	0.479

Comparison	Chi Square	Z-value	P-value	P-value adjusted
C.February.Bottom - S.January.Bottom	44.94	0.21	0.415	0.479
R.February.Top - S.December.Top	44.94	-0.20	0.419	0.482
C.December.Top - S.February.Bottom	44.94	0.19	0.423	0.485
C.February.Top - S.December.Bottom	44.94	-0.16	0.436	0.497
M.January.Top - R.February.Bottom	44.94	0.16	0.438	0.498
R.February.Bottom - S.February.Bottom	44.94	0.13	0.449	0.499
C.December.Bottom - M.December.Bottom	44.94	0.00	0.500	0.500
C.December.Top - R.January.Bottom	44.94	0.13	0.449	0.501
C.December.Bottom - M.December.Top	44.94	0.00	0.500	0.502
C.January.Top - S.January.Bottom	44.94	0.14	0.444	0.503
M.January.Bottom - S.January.Bottom	44.94	-0.13	0.447	0.503
C.February.Top - R.January.Top	44.94	-0.13	0.449	0.503
M.December.Bottom - M.December.Top	44.94	0.00	0.500	0.504
C.December.Bottom - R.December.Bottom	44.94	0.00	0.500	0.505
C.February.Top - C.January.Bottom	44.94	0.11	0.457	0.507
M.December.Bottom - R.December.Bottom	44.94	0.00	0.500	0.507
M.December.Top - R.December.Bottom	44.94	0.00	0.500	0.509
C.December.Bottom - R.December.Top	44.94	0.00	0.500	0.511
C.December.Top - M.January.Top	44.94	-0.09	0.464	0.512
M.December.Bottom - R.December.Top	44.94	0.00	0.500	0.513
M.December.Top - R.December.Top	44.94	0.00	0.500	0.515
R.January.Bottom - S.February.Bottom	44.94	0.06	0.474	0.515
R.December.Bottom - R.December.Top	44.94	0.00	0.500	0.517
C.February.Bottom - C.January.Top	44.94	0.08	0.470	0.517
C.December.Top - R.February.Bottom	44.94	0.06	0.474	0.517
C.December.Bottom - S.February.Top	44.94	0.00	0.500	0.519
R.February.Bottom - R.January.Bottom	44.94	0.06	0.474	0.519
M.December.Bottom - S.February.Top	44.94	0.00	0.500	0.521
M.December.Top - S.February.Top	44.94	0.00	0.500	0.523
R.December.Bottom - S.February.Top	44.94	0.00	0.500	0.525
R.December.Top - S.February.Top	44.94	0.00	0.500	0.527
R.January.Top - S.December.Bottom	44.94	-0.03	0.487	0.527
C.December.Bottom - S.January.Top	44.94	0.00	0.500	0.529
M.December.Bottom - S.January.Top	44.94	0.00	0.500	0.531
M.December.Top - S.January.Top	44.94	0.00	0.500	0.533
R.December.Bottom - S.January.Top	44.94	0.00	0.500	0.535
R.December.Top - S.January.Top	44.94	0.00	0.500	0.537
S.February.Top - S.January.Top	44.94	0.00	0.500	0.539

Table S4 - Shannon-Wiener evenness index post-hoc analyses for a Kruskal-Wallis model. Significant values marked in red, and comparisons are ranked by p-value from smallest to largest.

Comparison	Chi square	Z-value	P-value	P-value adjusted
C.December.Bottom - M.February.Top	44.13	-3.37	0.000	0.017
M.December.Bottom - M.February.Top	44.13	-3.37	0.000	0.021
M.December.Top - M.February.Top	44.13	-3.37	0.000	0.026
M.February.Top - S.February.Top	44.13	3.18	0.001	0.029
M.February.Top - R.December.Bottom	44.13	3.37	0.000	0.034
M.February.Top - R.December.Top	44.13	3.37	0.000	0.051
C.December.Bottom - S.December.Top	44.13	-2.64	0.004	0.071
C.December.Top - M.February.Top	44.13	-2.62	0.004	0.071
M.December.Bottom - S.December.Top	44.13	-2.64	0.004	0.076
M.December.Top - S.December.Top	44.13	-2.64	0.004	0.081
M.February.Top - S.February.Bottom	44.13	2.82	0.002	0.082
R.December.Bottom - S.December.Top	44.13	-2.64	0.004	0.088
M.February.Top - M.January.Top	44.13	2.53	0.006	0.088
M.February.Top - R.January.Bottom	44.13	2.76	0.003	0.089
S.December.Top - S.February.Top	44.13	2.49	0.006	0.093
R.December.Top - S.December.Top	44.13	-2.64	0.004	0.095
M.February.Top - R.February.Bottom	44.13	2.68	0.004	0.100
M.February.Top - S.January.Top	44.13	3.37	0.000	0.103
S.December.Top - S.January.Top	44.13	2.64	0.004	0.103
C.December.Bottom - R.February.Top	44.13	-2.07	0.019	0.115
C.December.Bottom - M.February.Bottom	44.13	-2.31	0.010	0.116
M.December.Bottom - R.February.Top	44.13	-2.07	0.019	0.117
M.December.Top - R.February.Top	44.13	-2.07	0.019	0.120
M.December.Bottom - M.February.Bottom	44.13	-2.31	0.010	0.120
R.December.Bottom - R.February.Top	44.13	-2.07	0.019	0.123
R.January.Bottom - S.December.Top	44.13	-2.03	0.021	0.124
R.December.Top - R.February.Top	44.13	-2.07	0.019	0.126
M.December.Top - M.February.Bottom	44.13	-2.31	0.010	0.126
C.February.Top - M.February.Top	44.13	-2.01	0.022	0.128
R.February.Top - S.January.Top	44.13	2.07	0.019	0.129
C.December.Bottom - C.February.Bottom	44.13	-2.08	0.019	0.130
M.February.Bottom - R.December.Bottom	44.13	2.31	0.010	0.131
C.February.Bottom - M.December.Bottom	44.13	2.08	0.019	0.133
R.February.Top - S.February.Top	44.13	1.95	0.025	0.135
M.February.Top - M.January.Bottom	44.13	1.94	0.026	0.135
C.February.Bottom - M.December.Top	44.13	2.08	0.019	0.137
R.February.Bottom - S.December.Top	44.13	-1.95	0.025	0.137
M.February.Bottom - R.December.Top	44.13	2.31	0.010	0.138

Comparison	Chi square	Z-value	P-value	P-value adjusted
C.January.Top - S.February.Top	44.13	1.97	0.024	0.138
C.February.Bottom - S.February.Top	44.13	1.96	0.025	0.138
C.February.Bottom - R.December.Bottom	44.13	2.08	0.019	0.141
C.December.Bottom - S.January.Bottom	44.13	-1.85	0.032	0.142
C.February.Bottom - R.December.Top	44.13	2.08	0.019	0.145
M.February.Bottom - S.January.Top	44.13	2.31	0.010	0.145
M.December.Bottom - S.January.Bottom	44.13	-1.85	0.032	0.145
M.December.Top - S.January.Bottom	44.13	-1.85	0.032	0.147
C.February.Bottom - S.January.Top	44.13	2.08	0.019	0.149
C.December.Bottom - C.January.Top	44.13	-2.09	0.018	0.149
R.December.Bottom - S.January.Bottom	44.13	-1.85	0.032	0.150
C.December.Top - S.December.Top	44.13	-1.89	0.029	0.150
M.February.Bottom - S.February.Top	44.13	2.18	0.015	0.151
C.January.Bottom - M.February.Top	44.13	-2.19	0.014	0.151
M.February.Top - R.January.Top	44.13	1.87	0.031	0.152
R.December.Top - S.January.Bottom	44.13	-1.85	0.032	0.152
C.January.Top - M.December.Bottom	44.13	2.09	0.018	0.154
M.February.Top - S.December.Bottom	44.13	1.87	0.031	0.155
S.January.Bottom - S.January.Top	44.13	1.85	0.032	0.155
M.January.Top - S.December.Top	44.13	-1.80	0.036	0.158
C.January.Top - M.December.Top	44.13	2.09	0.018	0.158
C.January.Top - R.December.Bottom	44.13	2.09	0.018	0.164
M.February.Bottom - S.February.Bottom	44.13	1.76	0.039	0.169
C.January.Top - R.December.Top	44.13	2.09	0.018	0.169
S.February.Top - S.January.Bottom	44.13	-1.75	0.040	0.171
C.January.Top - S.January.Top	44.13	2.09	0.018	0.175
S.December.Top - S.February.Bottom	44.13	2.09	0.018	0.179
M.February.Bottom - R.January.Bottom	44.13	1.70	0.045	0.188
M.February.Bottom - R.February.Bottom	44.13	1.62	0.052	0.216
C.December.Bottom - R.January.Top	44.13	-1.50	0.066	0.218
M.December.Bottom - R.January.Top	44.13	-1.50	0.066	0.221
R.January.Top - S.February.Top	44.13	1.42	0.078	0.222
C.December.Bottom - M.January.Bottom	44.13	-1.43	0.077	0.223
M.December.Top - R.January.Top	44.13	-1.50	0.066	0.223
R.February.Top - R.January.Bottom	44.13	1.46	0.072	0.224
C.December.Bottom - C.February.Top	44.13	-1.36	0.086	0.225
S.December.Bottom - S.February.Top	44.13	1.42	0.078	0.225
M.December.Bottom - M.January.Bottom	44.13	-1.43	0.077	0.225
C.January.Bottom - S.December.Top	44.13	-1.46	0.072	0.226
R.December.Bottom - R.January.Top	44.13	-1.50	0.066	0.226

Comparison	Chi square	Z-value	P-value	P-value adjusted
M.February.Bottom - M.January.Top	44.13	1.47	0.071	0.226
C.January.Top - R.February.Bottom	44.13	1.40	0.081	0.227
C.February.Top - M.December.Bottom	44.13	1.36	0.086	0.227
C.January.Top - R.January.Bottom	44.13	1.48	0.070	0.227
M.December.Top - M.January.Bottom	44.13	-1.43	0.077	0.227
R.December.Top - R.January.Top	44.13	-1.50	0.066	0.229
C.February.Bottom - R.January.Bottom	44.13	1.47	0.071	0.229
R.February.Bottom - R.February.Top	44.13	-1.39	0.083	0.229
C.February.Top - M.December.Top	44.13	1.36	0.086	0.229
C.February.Bottom - R.February.Bottom	44.13	1.39	0.082	0.229
M.January.Bottom - S.February.Top	44.13	1.35	0.089	0.230
M.January.Bottom - R.December.Bottom	44.13	1.43	0.077	0.230
C.February.Top - R.December.Bottom	44.13	1.36	0.086	0.231
C.December.Top - C.January.Top	44.13	-1.34	0.091	0.232
C.December.Bottom - S.December.Bottom	44.13	-1.50	0.066	0.232
M.January.Bottom - R.December.Top	44.13	1.43	0.077	0.232
C.February.Top - R.December.Top	44.13	1.36	0.086	0.234
C.December.Top - C.February.Bottom	44.13	-1.33	0.092	0.234
C.December.Top - R.February.Top	44.13	-1.32	0.093	0.234
M.December.Bottom - S.December.Bottom	44.13	-1.50	0.066	0.235
M.January.Bottom - S.January.Top	44.13	1.43	0.077	0.235
C.February.Top - S.January.Top	44.13	1.36	0.086	0.236
M.December.Top - S.December.Bottom	44.13	-1.50	0.066	0.238
S.February.Bottom - S.January.Bottom	44.13	-1.30	0.096	0.239
M.February.Top - R.February.Top	44.13	1.30	0.097	0.239
C.February.Bottom - M.February.Top	44.13	-1.29	0.098	0.239
C.January.Top - M.February.Top	44.13	-1.28	0.100	0.239
C.February.Top - S.December.Top	44.13	-1.28	0.101	0.239
C.February.Top - S.February.Top	44.13	1.29	0.099	0.240
R.December.Bottom - S.December.Bottom	44.13	-1.50	0.066	0.241
C.December.Top - M.February.Bottom	44.13	-1.56	0.060	0.242
R.December.Top - S.December.Bottom	44.13	-1.50	0.066	0.244
M.February.Top - S.January.Bottom	44.13	1.52	0.064	0.247
C.January.Top - S.February.Bottom	44.13	1.54	0.062	0.247
R.February.Top - S.February.Bottom	44.13	1.52	0.064	0.247
R.January.Top - S.January.Top	44.13	1.50	0.066	0.248
C.February.Bottom - S.February.Bottom	44.13	1.53	0.063	0.248
S.December.Bottom - S.January.Top	44.13	1.50	0.066	0.251
C.January.Top - M.January.Top	44.13	1.25	0.106	0.251
R.January.Bottom - S.January.Bottom	44.13	-1.24	0.107	0.251

Comparison	Chi square	Z-value	P-value	P-value adjusted
C.February.Bottom - M.January.Top	44.13	1.23	0.108	0.251
M.January.Top - R.February.Top	44.13	-1.23	0.109	0.252
M.January.Bottom - S.December.Top	44.13	-1.21	0.112	0.257
C.December.Bottom - C.January.Bottom	44.13	-1.18	0.119	0.258
C.January.Bottom - M.December.Bottom	44.13	1.18	0.119	0.260
C.January.Bottom - M.December.Top	44.13	1.18	0.119	0.262
R.February.Bottom - S.January.Bottom	44.13	-1.17	0.122	0.263
C.January.Bottom - R.December.Bottom	44.13	1.18	0.119	0.264
C.January.Bottom - R.December.Top	44.13	1.18	0.119	0.266
C.January.Bottom - S.January.Top	44.13	1.18	0.119	0.269
R.January.Top - S.December.Top	44.13	-1.14	0.127	0.271
S.December.Bottom - S.December.Top	44.13	-1.14	0.127	0.273
C.January.Bottom - M.February.Bottom	44.13	-1.13	0.130	0.273
C.January.Bottom - S.February.Top	44.13	1.11	0.133	0.277
C.December.Top - S.January.Bottom	44.13	-1.10	0.136	0.281
M.February.Bottom - M.February.Top	44.13	-1.06	0.144	0.296
M.January.Top - S.January.Bottom	44.13	-1.01	0.156	0.320
R.January.Top - S.February.Bottom	44.13	0.96	0.170	0.342
S.December.Bottom - S.February.Bottom	44.13	0.96	0.170	0.344
C.February.Top - M.February.Bottom	44.13	-0.95	0.172	0.345
C.January.Bottom - R.February.Top	44.13	-0.89	0.186	0.360
M.January.Bottom - S.February.Bottom	44.13	0.88	0.189	0.360
C.January.Bottom - C.January.Top	44.13	-0.91	0.182	0.362
R.January.Bottom - R.January.Top	44.13	-0.89	0.186	0.362
M.February.Bottom - M.January.Bottom	44.13	0.88	0.189	0.363
C.February.Bottom - C.January.Bottom	44.13	0.90	0.185	0.365
R.January.Bottom - S.December.Bottom	44.13	-0.89	0.186	0.365
C.December.Bottom - M.January.Top	44.13	-0.84	0.200	0.365
M.December.Bottom - M.January.Top	44.13	-0.84	0.200	0.367
M.January.Bottom - R.January.Bottom	44.13	0.82	0.207	0.369
M.February.Bottom - R.January.Top	44.13	0.81	0.210	0.370
M.December.Top - M.January.Top	44.13	-0.84	0.200	0.370
R.February.Bottom - R.January.Top	44.13	-0.82	0.207	0.371
C.December.Bottom - C.December.Top	44.13	-0.75	0.226	0.371
M.February.Bottom - S.December.Bottom	44.13	0.81	0.210	0.372
M.January.Top - R.December.Bottom	44.13	0.84	0.200	0.372
M.January.Top - S.February.Top	44.13	0.79	0.213	0.373
S.December.Top - S.January.Bottom	44.13	0.79	0.215	0.373
C.December.Top - M.December.Bottom	44.13	0.75	0.226	0.374
R.February.Bottom - S.December.Bottom	44.13	-0.82	0.207	0.374

Comparison	Chi square	Z-value	P-value	P-value adjusted
M.January.Bottom - R.February.Bottom	44.13	0.74	0.229	0.375
M.January.Top - R.December.Top	44.13	0.84	0.200	0.375
C.December.Bottom - S.February.Bottom	44.13	-0.55	0.292	0.375
C.December.Top - M.December.Top	44.13	0.75	0.226	0.376
C.February.Top - S.February.Bottom	44.13	0.82	0.207	0.376
M.December.Bottom - S.February.Bottom	44.13	-0.55	0.292	0.377
C.December.Bottom - R.February.Bottom	44.13	-0.69	0.246	0.377
M.January.Top - S.January.Top	44.13	0.84	0.200	0.377
M.January.Top - R.January.Top	44.13	-0.66	0.254	0.378
M.February.Top - S.December.Top	44.13	0.73	0.233	0.378
C.February.Top - C.January.Top	44.13	-0.72	0.234	0.378
C.December.Top - M.January.Bottom	44.13	-0.68	0.249	0.378
C.December.Top - R.December.Bottom	44.13	0.75	0.226	0.378
M.December.Top - S.February.Bottom	44.13	-0.55	0.292	0.378
C.December.Bottom - R.January.Bottom	44.13	-0.61	0.270	0.379
C.January.Bottom - S.January.Bottom	44.13	-0.67	0.251	0.379
M.January.Bottom - R.February.Top	44.13	-0.64	0.260	0.379
M.December.Bottom - R.February.Bottom	44.13	-0.69	0.246	0.379
C.December.Top - S.February.Top	44.13	0.71	0.239	0.379
R.February.Bottom - S.February.Top	44.13	0.65	0.258	0.379
R.February.Top - R.January.Top	44.13	0.57	0.285	0.379
M.January.Top - S.December.Bottom	44.13	-0.66	0.254	0.380
R.December.Bottom - S.February.Bottom	44.13	-0.55	0.292	0.380
C.February.Bottom - S.December.Top	44.13	-0.56	0.286	0.380
C.February.Top - R.February.Bottom	44.13	0.68	0.249	0.380
C.December.Top - R.December.Top	44.13	0.75	0.226	0.381
M.December.Bottom - R.January.Bottom	44.13	-0.61	0.270	0.381
C.February.Bottom - M.January.Bottom	44.13	0.65	0.258	0.381
C.February.Bottom - C.February.Top	44.13	0.71	0.238	0.381
R.February.Top - S.December.Bottom	44.13	0.57	0.285	0.381
M.December.Top - R.February.Bottom	44.13	-0.69	0.246	0.381
C.February.Top - R.February.Top	44.13	-0.71	0.239	0.382
C.January.Top - M.January.Bottom	44.13	0.66	0.254	0.382
R.December.Top - S.February.Bottom	44.13	-0.55	0.292	0.382
C.January.Bottom - S.February.Bottom	44.13	0.63	0.263	0.382
M.December.Top - R.January.Bottom	44.13	-0.61	0.270	0.382
C.December.Top - R.January.Top	44.13	-0.75	0.226	0.383
C.January.Top - S.December.Top	44.13	-0.55	0.290	0.383
C.January.Bottom - R.January.Bottom	44.13	0.57	0.285	0.383
R.December.Bottom - R.February.Bottom	44.13	-0.69	0.246	0.384

Comparison	Chi square	Z-value	P-value	P-value adjusted
S.February.Bottom - S.January.Top	44.13	0.55	0.292	0.384
R.December.Bottom - R.January.Bottom	44.13	-0.61	0.270	0.384
C.February.Bottom - R.January.Top	44.13	0.57	0.283	0.385
C.February.Top - M.January.Top	44.13	0.52	0.301	0.385
R.February.Top - S.December.Top	44.13	-0.57	0.285	0.385
S.February.Bottom - S.February.Top	44.13	0.52	0.303	0.385
C.December.Top - S.December.Bottom	44.13	-0.75	0.226	0.385
M.January.Bottom - M.January.Top	44.13	0.59	0.279	0.385
R.December.Top - R.February.Bottom	44.13	-0.69	0.246	0.386
C.February.Bottom - S.December.Bottom	44.13	0.57	0.283	0.386
R.December.Top - R.January.Bottom	44.13	-0.61	0.270	0.386
R.January.Bottom - S.February.Top	44.13	0.58	0.282	0.387
C.January.Top - R.January.Top	44.13	0.59	0.279	0.387
C.December.Top - S.January.Top	44.13	0.75	0.226	0.388
R.February.Bottom - S.January.Top	44.13	0.69	0.246	0.388
R.January.Bottom - S.January.Top	44.13	0.61	0.270	0.388
C.January.Top - S.December.Bottom	44.13	0.59	0.279	0.389
C.February.Top - R.January.Bottom	44.13	0.75	0.226	0.390
C.December.Top - C.February.Top	44.13	-0.61	0.270	0.390
C.January.Bottom - R.February.Bottom	44.13	0.49	0.311	0.393
C.February.Top - S.January.Bottom	44.13	-0.49	0.313	0.394
M.February.Bottom - S.January.Bottom	44.13	0.46	0.324	0.407
C.December.Top - C.January.Bottom	44.13	-0.43	0.334	0.417
M.January.Bottom - S.January.Bottom	44.13	-0.42	0.336	0.417
R.January.Top - S.January.Bottom	44.13	-0.35	0.364	0.448
S.December.Bottom - S.January.Bottom	44.13	-0.35	0.364	0.450
C.January.Bottom - M.January.Top	44.13	0.34	0.368	0.451
M.February.Bottom - S.December.Top	44.13	-0.33	0.370	0.451
C.January.Bottom - R.January.Top	44.13	-0.32	0.374	0.452
C.January.Bottom - S.December.Bottom	44.13	-0.32	0.374	0.454
M.January.Top - S.February.Bottom	44.13	0.30	0.384	0.463
C.January.Top - M.February.Bottom	44.13	-0.22	0.413	0.481
C.February.Bottom - M.February.Bottom	44.13	-0.23	0.409	0.482
C.February.Bottom - S.January.Bottom	44.13	0.23	0.411	0.482
R.February.Top - S.January.Bottom	44.13	0.22	0.413	0.483
C.January.Bottom - M.January.Bottom	44.13	-0.25	0.402	0.483
M.February.Bottom - R.February.Top	44.13	0.24	0.407	0.484
M.January.Top - R.January.Bottom	44.13	0.23	0.409	0.484
C.January.Top - S.January.Bottom	44.13	0.24	0.407	0.486
C.December.Top - S.February.Bottom	44.13	0.20	0.419	0.486

Comparison	Chi square	Z-value	P-value	P-value adjusted
C.February.Top - C.January.Bottom	44.13	0.18	0.428	0.494
C.December.Bottom - M.December.Bottom	44.13	0.00	0.500	0.500
C.December.Bottom - M.December.Top	44.13	0.00	0.500	0.502
C.February.Top - R.January.Top	44.13	-0.14	0.444	0.503
M.December.Bottom - M.December.Top	44.13	0.00	0.500	0.504
M.January.Top - R.February.Bottom	44.13	0.16	0.438	0.504
C.February.Top - S.December.Bottom	44.13	-0.14	0.444	0.505
C.December.Bottom - R.December.Bottom	44.13	0.00	0.500	0.505
R.February.Bottom - S.February.Bottom	44.13	0.14	0.444	0.507
M.December.Bottom - R.December.Bottom	44.13	0.00	0.500	0.507
C.December.Top - R.January.Bottom	44.13	0.14	0.444	0.509
M.December.Top - R.December.Bottom	44.13	0.00	0.500	0.509
C.December.Bottom - R.December.Top	44.13	0.00	0.500	0.511
M.December.Bottom - R.December.Top	44.13	0.00	0.500	0.513
M.December.Top - R.December.Top	44.13	0.00	0.500	0.515
R.December.Bottom - R.December.Top	44.13	0.00	0.500	0.517
R.January.Top - S.December.Bottom	44.13	0.00	0.500	0.519
C.December.Bottom - S.February.Top	44.13	0.00	0.500	0.521
C.February.Top - M.January.Bottom	44.13	-0.06	0.474	0.522
C.December.Top - M.January.Top	44.13	-0.09	0.464	0.522
M.December.Bottom - S.February.Top	44.13	0.00	0.500	0.523
R.February.Bottom - R.January.Bottom	44.13	0.08	0.470	0.523
R.January.Bottom - S.February.Bottom	44.13	0.06	0.474	0.524
M.December.Top - S.February.Top	44.13	0.00	0.500	0.525
M.January.Bottom - R.January.Top	44.13	-0.08	0.470	0.525
C.December.Top - R.February.Bottom	44.13	0.06	0.474	0.526
R.December.Bottom - S.February.Top	44.13	0.00	0.500	0.527
M.January.Bottom - S.December.Bottom	44.13	-0.08	0.470	0.527
R.December.Top - S.February.Top	44.13	0.00	0.500	0.529
C.December.Bottom - S.January.Top	44.13	0.00	0.500	0.531
M.December.Bottom - S.January.Top	44.13	0.00	0.500	0.533
M.December.Top - S.January.Top	44.13	0.00	0.500	0.535
R.December.Bottom - S.January.Top	44.13	0.00	0.500	0.537
R.December.Top - S.January.Top	44.13	0.00	0.500	0.539
C.January.Top - R.February.Top	44.13	0.02	0.494	0.541
C.February.Bottom - C.January.Top	44.13	-0.01	0.496	0.541
C.February.Bottom - R.February.Top	44.13	0.01	0.498	0.541
S.February.Top - S.January.Top	44.13	0.00	0.500	0.541

Table S5 – *Fosterygion lapillum* mean length (TL mm) post-hoc analyses for linear mixed model using emmeans. Significant values marked in red, and comparisons are ranked by p-value from smallest to largest.

contrast	Habitat	estimate	SE	df	t.ratio	p.value
(Dec-20) - (Jan-21)	S	-15.98	1.49	375.5	-10.76	0.000
(Dec-20) - (Feb-21)	S	-19.28	1.70	474.3	-11.35	0.000
(Dec-20) - (Jan-21)	R	-16.86	2.29	486.9	-7.38	0.000
(Dec-20) - (Feb-21)	R	-17.57	2.23	488.1	-7.89	0.000
(Dec-20) - (Jan-21)	M	-10.06	1.24	514.8	-8.14	0.000
(Dec-20) - (Feb-21)	C	-16.92	1.79	518.6	-9.47	0.000
(Dec-20) - (Feb-21)	M	-16.55	1.26	528.8	-13.08	0.000
(Feb-21) - (Jan-21)	M	6.48	1.03	528.5	6.31	0.000
(Feb-21) - (Jan-21)	C	7.45	1.35	528.4	5.53	0.000
(Dec-20) - (Jan-21)	C	-9.48	1.79	529.0	-5.29	0.000
M - S	Dec-20	7.18	1.85	73.4	3.89	0.001
C - S	Dec-20	7.64	2.18	116.1	3.50	0.004
C - R	Feb-21	5.24	1.89	71.0	2.78	0.034
M - R	Feb-21	4.41	1.68	57.6	2.63	0.052
C - S	Feb-21	5.29	2.09	89.4	2.54	0.061
(Feb-21) - (Jan-21)	S	3.29	1.55	524.0	2.12	0.087
M - S	Feb-21	4.45	1.90	78.3	2.35	0.096
M - R	Dec-20	5.43	2.50	169.1	2.17	0.135
C - R	Dec-20	5.89	2.75	203.8	2.14	0.145
R - S	Jan-21	2.63	1.92	71.7	1.37	0.519
C - R	Jan-21	-1.50	1.93	75.7	-0.78	0.865
M - R	Jan-21	-1.37	1.79	66.8	-0.77	0.869
(Feb-21) - (Jan-21)	R	0.71	1.47	528.7	0.48	0.881
M - S	Jan-21	1.26	1.74	51.1	0.73	0.886
R - S	Dec-20	1.75	2.46	158.1	0.71	0.892
C - S	Jan-21	1.13	1.89	59.8	0.60	0.931
C - M	Feb-21	0.84	1.75	55.1	0.48	0.964
C - M	Dec-20	0.46	2.22	126.7	0.21	0.997
C - M	Jan-21	-0.13	1.76	54.5	-0.07	1.000
R - S	Feb-21	0.05	2.03	95.9	0.02	1.000