Appendix. Data tables for Chapter 2

Table 1. Visitation rates for flying visitors, standardized in different ways. Mean ± SD/SE (range). n = 235

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Shrub |  |  |  | Open |  |
|  | Visits/hour | Fl/hour | Visits/flr/hour | Fls/flr/hour | Visits/hour | Fl/hour | Visits/flr/hour | Flrs/fl/hour |
| Pre | 3.00 ± 3.13/0.41 (0 – 19.62) | 3.78 ± 4.74/0.62 (0 – 31.40) | 0.35 ± 0.32/0.04 (0 – 1.66) | 0.43 ± 0.47/0.06 (0 – 2.61) | 4.29 ± 4.62/0.61 (0 – 20.10) | 5.76 ± 7.55/1.00 (0 - 40.21) | 0.50 ± 0.58/0.08 (0 – 3.35) | 0.67 ± 1.01/0.13 (0 – 6.70) |
| Post | 0.95 ± 1.27/0.16 (0 – 5.80) | 1.27 ± 2.05/0.26 (0 – 9.37) | 0.10 ± 0.13/0.02 (0 – 0.64) | 0.13 ± 0.20/0.03 (0 – 1.02) | 1.25 ± 1.38/0.18 (0 – 5.49) | 1.72 ± 2.22/0.29 (0 – 11.49) | 0.13 ± 0.14/0.02 (0 – 0.69) | 0.16 ± 0.20/0.03 (0 – 0.77) |
| Total (pre + post) | 1.96 ± 2.59/0.23 (0 – 19.62) | 2.51 ± 3.84/0.35 (0 – 31.40) | 0.22 ± 0.28/0.03 (0 – 1.66) | 0.28 ± 0.39/0.04 (0 – 2.61) | 2.75 ± 3.70/0.34 (0 – 20.10) | 3.71 ± 5.86/0.54 (0 – 40.21) | 0.31 ± 0.46/0.04 (0 – 3.35) | 0.41 ± 0.76/0.07 (0 – 6.70) |
| Total (shrub + open) | Pre: 3.64 ± 3.97/0.37 (0 - 20.10) | Pre: 4.75 ± 6.33/0.59 (0 – 40.21) | Pre: 0.42 ± 0.47/0 .04 (0 - 3.35) | Pre: 0.55 ± 0.79/0.07 (0 – 6.70) | Post: 1.10 ± 1.33/0.12 (0 – 5.80) | Post: 1.49 ± 2.14/ 0.20 (0 – 11.49) | Post: 0.11 ± 0.14/0.01 (0 – 0.69) | Post: 0.15 ± 0.20/0.02 (0 – 1.02) |

Table 2. Visitation rates for all visitors, standardized in different ways. Total visits/Mean ± SD/SE (range)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Shrub |  |  |  | Open |  |
|  | Visits/hour | Fl/hour | Visits/flr/hour | Fls/flr/hour | Visits/hour | Fl/hour | Visits/flr/hour | Flrs/fl/hour |
| Pre | 4.47 ± 3.52/0.46 (0 – 20.61) | 5.27 ± 4.87/0.63 (0 – 32.38) | 0.54 ± 0.43/0.06 (0 – 2.14) | 0.63 ± 0.53/0.017 (0 – 2.70) | 6.34 ± 5.94/0.79 (0 – 23.97) | 7.84 ± 8.31/1.10 (0 – 43.93) | 0.73 ± 0.73/0.10 (0 – 3.97) | 0.91 ± 1.11/0.15 (0 – 7.32) |
| Post | 2.07 ± 2.98/0.38 (0 – 16.69) | 2.40 ± 3.49/0.45 (0 – 16.69) | 0.21 ± 0.33/0.04 (0 – 2.09) | 0.24 ± 0.38/0.05 (0 – 2.07) | 2.61 ± 3.19/0.42 (0 – 17.85) | 3.25 ± 3.88/0.50 (0 – 17.85) | 0.26 ± 0.36/0.05 (0 – 2.23) | 0.31 ± 0.40/0.05 (0 – 2.23) |
| Total (pre + post) | 3.26 ± 3.46/0.32 (0 – 20.61) | 3.82 ± 4.45/0.41 (0 – 32.38) | 0.37 ± 0.42/0.04 (0 – 2.14) | 0.43 ± 0.49/0.05 (0 – 2.67) | 4.45 ± 5.08/0.47 (0 – 23.97) | 5.50 ± 6.82/0.63(0 – 43.93) | 0.49 ± 0.62/0.06 (0 – 3.97) | 0.61 ± 0.87/0.08 (0 – 7.32) |
| Total (shrub + open) | Pre: 5.39 ± 4.93/0.49 (0 – 23.97) | Pre: 6.53 ± 6.87/0.64 (0 – 43.93) | Pre: 0.63 ± 0.60/0.06 (0 – 3.97) | Pre: 0.77 ± 0.87/0.08 (0 – 7.32) | Post: 2.34 ± 3.08/0.28 (0 – 17.85) | Pre: 2.82 ± 3.69/0.34 (0 – 17.85) | Pre: 0.24 ± 0.35/0.03 (0 – 2.23) | Post: 0.28 ± 0.39/0.04 (0 – 2.23) |

Table 3: Number of flowers in pots

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| treatment | flowering | mean | sd | se | min | max |
| open | bloom | 10.49153 | 3.212974 | 0.418294 | 6 | 21 |
| open | pre | 9.508772 | 2.77825 | 0.367988 | 5 | 18 |
| shrub | bloom | 10.48333 | 3.186261 | 0.411345 | 6 | 21 |
| shrub | pre | 9.338983 | 2.623568 | 0.341559 | 5 | 16 |

Table 4: Shrub sizes (cm)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | mean | sd | se | min | max |
| Width | 336.67 | 103.09 | Na right now | 148 | 552 |
| Height | 209.46 | 45.39 |  | 115 | 340 |
| Volume |  |  |  |  |  |

Table 5: Results from negative binomial mixed effects model, null model and comparison of models.

Generalized linear mixed model fit by maximum likelihood (Laplace

Approximation) [glmerMod]

Family: Negative Binomial(3.7999) ( log )

Formula: percent.cover ~ treatment + blooming + (1 | repID)

Data: metadata

AIC BIC logLik deviance df.resid

1553.9 1571.1 -772.0 1543.9 223

Scaled residuals:

Min 1Q Median 3Q Max

-1.5609 -0.6787 -0.2420 0.4861 4.2883

Random effects:

Groups Name Variance Std.Dev.

repID (Intercept) 0.1616 0.402

Number of obs: 228, groups: repID, 126

Fixed effects:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 1.15132 0.10182 11.307 < 2e-16 \*\*\*

treatmentshrub 2.14420 0.11424 18.770 < 2e-16 \*\*\*

bloomingpre 0.28083 0.08482 3.311 0.00093 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) trtmnt

tretmntshrb -0.713

bloomingpre -0.474 0.105

Table 5: For understory annual richness

Generalized linear mixed model fit by maximum likelihood (Laplace

Approximation) [glmerMod]

Family: poisson ( log )

Formula: understory.richness ~ treatment + flowering + (1 | repID)

Data: visits

AIC BIC logLik deviance df.resid

707.6 721.3 -349.8 699.6 227

Scaled residuals:

Min 1Q Median 3Q Max

-1.51239 -0.28764 -0.08821 0.47124 1.62890

Random effects:

Groups Name Variance Std.Dev.

repID (Intercept) 0 0

Number of obs: 231, groups: repID, 122

Fixed effects:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 0.75551 0.07700 9.811 <2e-16 \*\*\*

treatmentshrub 0.07186 0.08546 0.841 0.4

floweringpre 0.14068 0.08560 1.643 0.1

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) trtmnt

tretmntshrb -0.580

floweringpr -0.595 -0.004