Appendix S1 - Full model results

Contents


```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union

##
## Attaching package: 'nlme'

## The following object is masked from 'package:dplyr':
##
##     collapse

## Loading in data version 3.25.0

## Joining, by = "plot"

## Loading in data version 3.25.0

## Joining, by = "plot"

## Joining, by = "period"
## Joining, by = "period"
```

Because there are 5 exclosures and 4 controls, we remove 1 exclosure plot. Using `set.seed(1977)` and sampling 1 plot from the 5 possible exclosures to remove, we remove plot 19.

Compensation & total energy use

Compensation

```
## Joining, by = "oera"
```

Table S1. Coefficients from GLS for compensation

```
##                   Value  Std.Error   t-value      p-value
## (Intercept)  0.34503129 0.02949958 11.696141 8.903067e-27
## oera.L       0.06479327 0.05241035  1.236269 2.172146e-01
## oera.Q      -0.28335529 0.04773594 -5.935890 7.228121e-09
```

Table S2. Estimates from GLS for compensation

```
##           oera    emmean         SE       df   lower.CL  upper.CL
## 1     a_pre_pb 0.1835362 0.05203782 43.00020 0.07859198 0.2884805
## 2  b_pre_reorg 0.5763899 0.04626406 46.19839 0.48327599 0.6695038
## 3 c_post_reorg 0.2751677 0.05280098 45.59188 0.16885920 0.3814763
```

Table S3. Contrasts from GLS for compensation

```
##                      contrast    estimate         SE       df   t.ratio p.value
## 1     a_pre_pb - b_pre_reorg -0.39285369 0.06894132 46.70328 -5.698378  0.0000
## 2    a_pre_pb - c_post_reorg -0.09163152 0.07411943 44.37665 -1.236269  0.4385
## 3 b_pre_reorg - c_post_reorg  0.30122217 0.06949891 48.30465  4.334200  0.0002
```

Total energy use

Table S4. Coefficients from GLS on total energy ratio

```
##                   Value  Std.Error   t-value      p-value
## (Intercept)  0.5016731 0.02711764 18.499880 2.562257e-53
## oera.L       0.1413504 0.04776457  2.959316 3.300140e-03
## oera.Q      -0.2503659 0.04293122 -5.831790 1.279286e-08
```

Table S5. Estimates from GLS on total energy ratio

```
##           oera    emmean         SE       df  lower.CL  upper.CL
## 1     a_pre_pb 0.2995118 0.04758060 36.07948 0.2030213 0.3960023
## 2  b_pre_reorg 0.7060960 0.04197730 38.39277 0.6211459 0.7910460
## 3 c_post_reorg 0.4994115 0.04800663 37.50364 0.4021849 0.5966381
```

Table S6. Contrasts from GLS on total energy ratio

```
##                      contrast   estimate         SE       df   t.ratio p.value
## 1     a_pre_pb - b_pre_reorg -0.4065842 0.06233984 40.38396 -6.522060  0.0000
## 2    a_pre_pb - c_post_reorg -0.1998997 0.06754930 37.00046 -2.959316  0.0145
## 3 b_pre_reorg - c_post_reorg  0.2066845 0.06264557 41.31271  3.299267  0.0056
```

Community composition

Kangaroo rat proportional energy use

```
## Warning in eval(family$initialize): non-integer #successes in a binomial glm!
```

Table S7. Coefficients from GLM on Dipodomys energy use.

```
##               Estimate Std. Error   z value     Pr(>|z|)
## (Intercept)  1.4032480  0.1503201  9.335068 1.009263e-20
## oera.L      -1.1000833  0.2871738 -3.830723 1.277674e-04
## oera.Q       0.5855493  0.2304516  2.540878 1.105745e-02
```

Table S8. Estimates from GLM on Dipodomys energy use.

```
##           oera      prob         SE  df asymp.LCL asymp.UCL
## 1     a_pre_pb 0.9183528 0.02564615 Inf 0.8680872 0.9686183
## 2  b_pre_reorg 0.7160901 0.03985374 Inf 0.6379782 0.7942020
## 3 c_post_reorg 0.7035835 0.04566769 Inf 0.6140765 0.7930905
```

Table S9. Contrasts from GLM on Dipodomys energy use.

```
##                      contrast   estimate         SE  df   z.ratio p.value
## 1     a_pre_pb - b_pre_reorg 0.20226269 0.04739247 Inf 4.2678236  0.0001
## 2    a_pre_pb - c_post_reorg 0.21476925 0.05237616 Inf 4.1005151  0.0001
## 3 b_pre_reorg - c_post_reorg 0.01250656 0.06061236 Inf 0.2063368  0.9768
```

C. baileyi proportional energy use

```
## Warning in eval(family$initialize): non-integer #successes in a binomial glm!

## Warning in eval(family$initialize): non-integer #successes in a binomial glm!

## Warning in eval(family$initialize): non-integer #successes in a binomial glm!
```

Note that a model fit as `pb_proportional_energy_use ~ era + treatment + era:treatment` does not outperform a model fit without the interaction term, or `pb_proportional_energy_use ~ era + treatment` (AIC for the no interaction model = 231 compared to 237 for the interaction model; p-value for an anova Chi-squared comparison of the two models = 0.15). We therefore use the model without the interaction term.

Table S10. Coefficients from GLM on C. baileyi energy use

```
##               Estimate Std. Error   z value     Pr(>|z|)
## (Intercept) -1.574028  0.1670168 -9.424367 4.327058e-21
## oera.L      -1.409273  0.2010398 -7.009921 2.384524e-12
## oplottype.L  2.184896  0.2267112  9.637355 5.560233e-22
```

Table S11. Estimates from GLM on C. baileyi energy use

```
##           oera      prob         SE  df  asymp.LCL asymp.UCL
## 1  b_pre_reorg 0.3595031 0.03966444 Inf 0.28176221 0.4372440
## 2 c_post_reorg 0.0710590 0.01702653 Inf 0.03768761 0.1044304
```

Table S12. Contrasts from GLM on C. baileyi energy use.

```
##                     contrast  estimate         SE  df  z.ratio p.value
## 1 b_pre_reorg - c_post_reorg 0.2884441 0.04036733 Inf 7.145484       0
```