Appendix S1 - Full model results

Appendix to Diaz, R. M. and Ernest, S. K. M., "Maintenance of community function through compensation breaks down over time in a desert rodent community" for review at *Ecology.* This document contains tables with the coefficients, estimates, and contrasts from each of the analyses referenced in the main text. For complete data and code to replicate these analyses, see the archives at https://doi.org/10.5281/zenodo.5544362 and https://doi.org/10.5281/zenodo.5539881.

Table of Contents

Compensation & total energy use

Compensation

Call: gls(smgran_comp ~ oera, correlation = corCAR1(form = ~ period), data = compensation)

Table S1. Coefficients from GLS for compensation

	Value	Std.Error	t-value	p-value
(Intercept)	0.3185409	0.0274749	11.5938657	0.0000000
oera.L	0.0209564	0.0488961	0.4285901	0.6684937
oera.Q	-0.2815324	0.0446748	-6.3018205	0.0000000

Table S2. Estimates from GLS for compensation

oera	emmean	SE	df	lower.CL	upper.CL
a_pre_pb	0.1887873	0.0484923	65.54814	0.0919569	0.2856178
b_pre_reorg	0.5484112	0.0432238	70.42672	0.4622133	0.6346090
c_post_reorg	0.2184241	0.0493101	69.66681	0.1200700	0.3167783

Table S3. Contrasts from GLS for compensation

contrast	estimate	SE	df	t.ratio	p.value
a_pre_pb - b_pre_reorg	-0.3596238	0.0644233	70.46124	-5.5822045	0.0000012
a_pre_pb - c_post_reorg	-0.0296368	0.0691495	67.68957	-0.4285901	0.9038589
b_pre_reorg - c_post_reorg	0.3299870	0.0650229	72.95450	5.0749352	0.0000085

Total energy use

Call: gls(total_e_rat ~ oera, correlation = corCAR1(form = ~ period), data = energy_ratio)

Table S4. Coefficients from GLS on total energy ratio

	Value	Std.Error	t-value	p-value
(Intercept)	0.4804768	0.0263030	18.267021	0.0000000
oera.L	0.1178169	0.0463516	2.541812	0.0114727
oera.Q	-0.2488846	0.0416891	-5.970013	0.0000000

Table S5. Estimates from GLS on total energy ratio

oera	emmean	SE	df	lower.CL	upper.CL
a_pre_pb	0.2955610	0.0461672	36.61089	0.2019837	0.3891382
b_pre_reorg	0.6836903	0.0407429	38.96128	0.6012774	0.7661031
c_post_reorg	0.4621793	0.0465896	38.08195	0.3678702	0.5564884

Table S6. Contrasts from GLS on total energy ratio

contrast	estimate	SE	df	t.ratio	p.value
a_pre_pb - b_pre_reorg	-0.3881293	0.0605211	40.90187	-6.413128	0.0000003
a_pre_pb - c_post_reorg	-0.1666183	0.0655510	37.54898	-2.541812	0.0396340
b_pre_reorg - c_post_reorg	0.2215110	0.0608245	41.85824	3.641807	0.0020937

Community composition

Kangaroo rat proportional energy use

Call: glm(dipo_prop ~ oera, family = quasibinomial(), data= dipo_c_dat)

Table S7. Coefficients from GLM on Dipodomys energy use.

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	1.4032480	0.0594085	23.620308	0
oera.L	-1.1000833	0.1134950	-9.692789	0
oera.Q	0.5855493	0.0910776	6.429125	0

Table S8. Estimates from GLM on Dipodomys energy use.

oera	prob	SE	df	asymp.LCL	asymp.UCL
a_pre_pb	0.9183528	0.0101357	Inf	0.8984872	0.9382184
b_pre_reorg	0.7160901	0.0157507	Inf	0.6852192	0.7469610
c_post_reorg	0.7035835	0.0180485	Inf	0.6682091	0.7389579

Table S9. Contrasts from GLM on Dipodomys energy use.

contrast	estimate	SE	df	z.ratio	p.value
a_pre_pb - b_pre_reorg	0.2022627	0.0187302	Inf	10.7987757	0.0000000
a_pre_pb - c_post_reorg	0.2147693	0.0206998	Inf	10.3754389	0.0000000
b_pre_reorg - c_post_reorg	0.0125066	0.0239548	Inf	0.5220892	0.8605416

C. baileyi proportional energy use

Call: glm(pb_prop ~ oera * oplottype, family = quasibinomial(), data= pb_nozero)

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

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-2.0044026	0.1600536	-12.523322	0.0000000
oera.L	-2.0922433	0.2263500	-9.243401	0.0000000
oplottype.L	2.7474318	0.2263500	12.137983	0.0000000
oera.L:oplottype.L	0.8986645	0.3201072	2.807386	0.0052111

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

oera	oplottype	prob	SE	df	asymp.LCL	asymp.UCL
b_pre_reorg	CC	0.1172888	0.0094009	Inf	0.0988634	0.1357142
c_post_reorg	CC	0.0027984	0.0017460	Inf	-0.0006237	0.0062206
b_pre_reorg	EE	0.7248069	0.0130485	Inf	0.6992323	0.7503815
c_post_reorg	EE	0.2512829	0.0144098	Inf	0.2230401	0.2795256

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

contrast	oplottype	estimate	SE	df	z.ratio	p.value
b_pre_reorg - c_post_reorg	CC	0.1144904	0.0095617	Inf	11.97390	0
b_pre_reorg - c_post_reorg	EE	0.4735241	0.0194398	Inf	24.35843	0