

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	2
Compensation	2
Table S1. Coefficients from GLS for compensation	2
Table S2. Estimates from GLS for compensation	3
Table S3. Contrasts from GLS for compensation	4
Total energy use	5
Table S4. Coefficients from GLS on total energy ratio	5
Table S5. Estimates from GLS on total energy ratio	6
Table S6. Contrasts from GLS on total energy ratio	7
Community composition	8
Kangaroo rat proportional energy use	8
Table S7. Coefficients from GLM on Dipodomys energy use.	8
Table S8. Estimates from GLM on Dipodomys energy use.	9
Table S9. Contrasts from GLM on Dipodomys energy use	10
C. baileyi proportional energy use	11
Table S10. Coefficients from GLM on C. baileyi energy use	11
Table S11. Estimates from GLM on C. baileyi energy use	12
Table S12. Contrasts from GLM on C. baileyi energy use	13

29 **Compensation & total energy use**

30 **Compensation**

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

32 **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

33

34

35 **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

36

37

38 **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

39

40

41 **Total energy use**

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

43 **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

44

45 **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

46

47

48 **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

49

50

51 **Community composition**

52 **Kangaroo rat proportional energy use**

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

54 **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

55

56

57 **Table S8. Estimates from GLM on Dipodomys energy use.**

oera	prob	SE	df	asympt.LCL	asympt.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

58

59

60 **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

61

62

63 **C. baileyi proportional energy use**

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

65 **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
oplotype.L	2.7474318	0.2263500	12.137983	0.0000000
oera.L:oplotype.L	0.8986645	0.3201072	2.807386	0.0052111

66

67

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

oera	oplotype	prob	SE	df	asympt.LCL	asympt.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

69

70

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

contrast	oploptype	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

72