

Supplement

Fig. S1

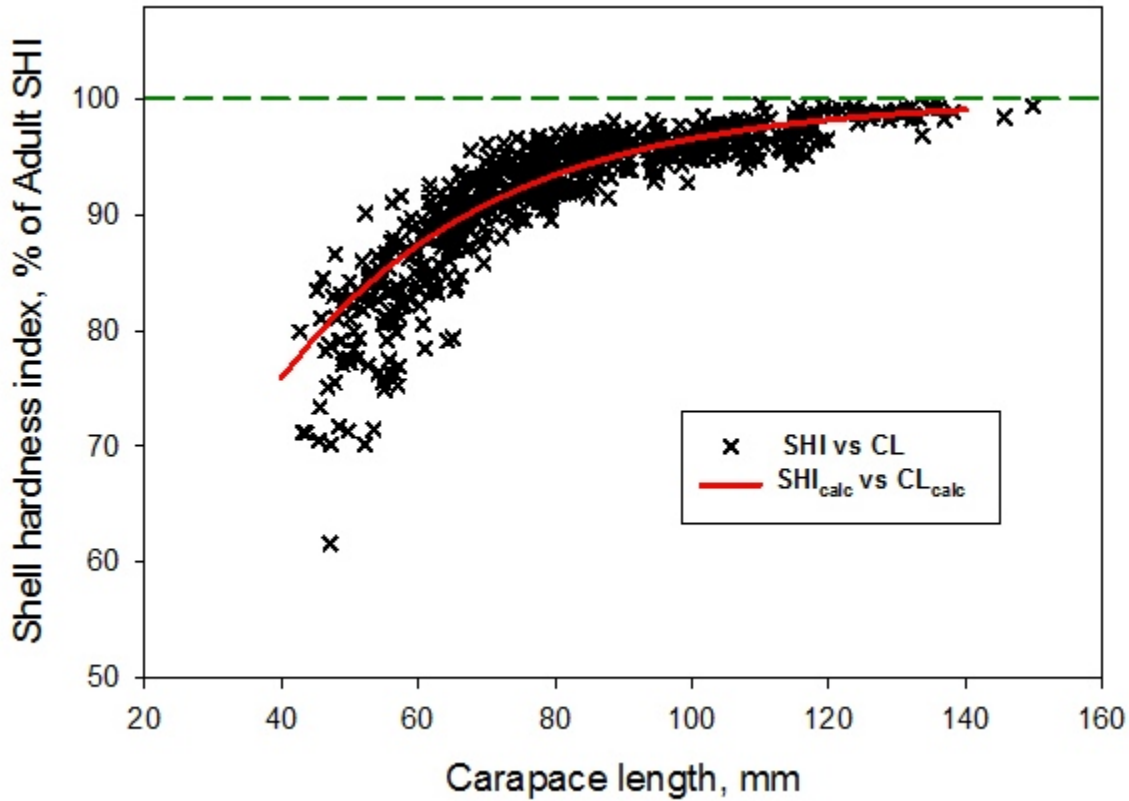


Figure S1. Relationship between shell hardness (SHI) and shell size (carapace length, CL) of one to 11 year old desert tortoises living in natural-habitat enclosures, and experiencing natural rainfall plus irrigation. The red curve represents the transformed linear regression equation calculated for a semilog analysis. The dashed green line represents a fully-rigid adult shell defined as being incompressible by our digital micrometer.

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Table S1. Annual growth rates (mm y⁻¹ in carapace length) of eight cohorts of desert tortoises in MCAGCC’s head-start facility over 11 years (total n = 3361). Values are means (SD, n), with overall means (SD, n) shown for cohorts (right column) and year (bottom row). Superscripts at overall means indicate the number of means significantly higher and lower (e.g., 2 higher and 1 lower for Cohort 2006) from Student-Newman-Keul’s post-hoc comparisons that followed One Way ANOVA.

	Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Cohort total	
Cohort	2006	Mean	6.13	7.39	4.74	6.51	2.93	4.97	1.69	7.21	11.36	9.69	12.75	6.87 ^{2,1}
		SD	2.52	2.64	2.85	2.50	2.59	1.32	1.50	2.66	3.07	2.54	4.19	2.85
		n	45	80	90	82	15	15	77	71	68	37	20	600
	2007		7.40	4.13	5.25	3.26	5.12	2.01	7.52	9.86	9.38	12.18	6.59 ^{2,1}	
			2.51	2.37	1.97	1.74	2.19	1.88	1.78	2.79	3.33	3.27	2.85	
			34	35	33	20	20	33	32	32	31	25	295	
	2008			6.84	6.32	4.12	5.32	3.29	8.04	10.20	9.05	11.71	7.19 ^{2,1}	
				2.58	2.67	2.03	2.47	1.71	2.61	2.11	2.83	2.34	3.05	
				97	87	72	72	82	81	77	73	50	691	
	2009				9.78	6.26	4.97	2.54	6.39	9.02	7.53	10.13	7.06 ^{1,1}	
					3.00	2.05	2.07	1.71	2.47	2.17	2.29	2.23	3.07	

				106	73	66	69	67	68	66	57	572
2010					9.07	5.67	3.42	6.27	8.57	7.65	10.58	7.24 ^{2,1}
					2.42	2.52	1.99	2.17	2.51	2.31	1.99	3.04
					71	64	66	62	57	59	61	440
2011						8.51	1.25	5.42	4.88	6.03	8.86	5.60 ^{7,0}
						2.94	0.95	2.13	1.70	2.24	2.67	3.08
						77	78	77	56	71	69	428
2012							5.75	7.32	9.62	8.30	9.07	7.45 ^{1,5}
							3.46	2.95	2.01	2.41	2.40	2.97
							53	59	34	42	53	241
2013								9.93	7.47	9.04	11.55	7.90 ^{0,7}
								3.12	2.96	2.32	1.96	2.87
								24	19	26	25	94
Annual total	6.24 ^{6,1}	7.60 ^{3,5}	5.58 ^{6,1}	7.44 ^{3,5}	5.89 ^{6,1}	6.33 ^{6,1}	2.92 ^{10,0}	7.08 ^{3,5}	9.12 ^{1,9}	8.17 ^{2,8}	10.5 ^{0,10}	6.95
	2.89	2.96	2.98	2.98	2.92	2.91	2.89	2.82	2.82	2.80	2.80	3.55
	45	114	222	308	251	314	458	473	411	405	360	3361