

This is an electronic appendix to the paper by Lima *et al.* 2002 Population dynamics of a South American rodent: seasonal structure interacting with climate, density dependence and predator effects. *Proc. R. Soc. Lond. B* **269**, 2579—2586. (DOI 10.1098/rspb.2002.2142.)

Electronic appendices are refereed with the text. However, no attempt is made to impose a uniform editorial style on the electronic appendices.

Electronic Appendix A

Statistical models tested are denoted according to each model specific-variation in survival ($\phi = \text{Phi}$), capture (p), seniority probabilities ($\gamma = \text{Gamma}$), and population growth rate ($\lambda = \text{Lambda}$) for females. t denotes full time-specific variation, (m) denotes monthly time-specific variation, (year) denotes between-year variation, (season) denotes seasonal (breeding and non-breeding) variation, (\cdot) denotes no time-specific variation (a single value estimated for all time periods). AIC_c is the estimated AIC (Akaike's information criterion): lower values indicate more parsimonious models. Boldface indicates the selected model.

Model	AICc	ΔAICc	Weight	#Par	Deviance
{$\phi(\text{seasonal} + \text{year})p(\cdot)$}	2633.21	0.00	1.00	29	2129.55
{ $\phi(m+\text{year})p(\cdot)$ }	2658.74	25.53	0.00	27	2229.21
{ $\phi(\text{year})p(\cdot)$ }	2672.64	39.42	0.00	15	2267.71
{ $\phi(t)p(\cdot)$ }	2686.71	53.50	0.00	106	2086.15
{ $\phi(m)p(\cdot)$ }	2788.98	155.76	0.00	13	2388.12
{ $\phi(\cdot)p(\cdot)$ }	2893.83	260.62	0.00	2	2515.17

Model	AICc	ΔAICc	Weight	#Par	Deviance
{ $\gamma(\text{season} + \text{year})p(\cdot)$ }	2942.41	0.00	0.894	29	2508.75
{ $\gamma(\text{m}+\text{year})p(\cdot)$ }	2946.68	4.26	0.105	25	2521.27
{ $\gamma(\text{year})p(\cdot)$ }	2985.82	43.41	0.00	14	2582.93
{ $\gamma(\text{t})p(\cdot)$ }	3018.59	76.18	0.00	106	2418.08
{ $\gamma(\text{m})\}p(\cdot)$ }	3081.50	139.08	0.00	13	2680.64
{ $\gamma(\cdot)p(\cdot)$ }	3229.89	287.47	0.00	2	2851.23

Model	AICc	ΔAICc	Weight	#Par	Deviance
{ $\phi(\text{season} + \text{year})p(\cdot)\gamma(\text{season} + \text{year})$ }	15303.20	0.00	1.00	57	14810.63
{ $\phi(\text{m} + \text{year})p(\cdot)\gamma(\text{m} + \text{year})$ }	15382.75	79.55	0.00	53	14898.72
{ $\phi(\text{m} + \text{year})p(\cdot)\gamma(\text{m})$ }	15827.02	523.81	0.00	39	15372.54
{ $\phi(\text{t})p(\cdot)\gamma(\cdot)$ }	15834.74	531.54	0.00	101	15245.54