Appendix S1 Output of MCMCglmm models testing for correlation between circannual deviation and survival rates, accounting and not accounting for phylogenetic effect

Table S7. Relationship between circannual deviations and species-specific annual survival probabilities, accounting and not accounting for the phylogenetic effect. Both variables were adjusted to log(BMR). The explanatory variable Cycle was included to account for the possible effect of the cycles being fully ($Cycle_{full}$) or partly ($Cycle_{transitory}$) undergone in unvarying photoregime. The posterior estimates (means) of the effect sizes with the highest posterior density intervals (95% credible interval, limited by lower and upper CI) for the models accounting for phylogenetic effects are calculated from the joint posterior distribution of 100 separate runs each with one of 100 separate phylogenetic trees from http://birdtree.org. pMCMC is the two times the smaller of the two quantities: MCMC estimates of i) the probability that $a<0$ or ii) the probability that $a>0$, where a is the parameter value. The MCMC chains ran for 1 300 000 iterations with a burn-in of 30 000 and a thinning interval of 50. Each model generated ~1,100 independent samples of model parameters. Tests for autocorrelation were applied to assess for independence of samples in the Markov chain.

	no phylogeny				**with phylogeny (on 100 phylogenetic trees in mulTree)**				
fixed terms	**Estimate**	**lower CI**	**upper CI**	**pMCMC**	**posterior mean**	**lower CI**	**upper CI**	**pMCMC, mean**	**pMCMC, range**
intercept	-6.4	-40.8	26.6	0.699	-8.9	-63.0	44.3		
$Cycle_{full}$	10.4	1.5	19.2	0.021	10.2	1.3	19.1	0.025	0.006 - 0.053
slope of $Deviation_{BMR}$ on $Survival_{BMR}$ (cycle 0)	196.1	71.4	325.5	0.003	211.3	61.6	363.6	0.008	0.001 - 0.024
slope of $Deviation_{BMR}$ on $Survival_{BMR}$ (cycle 1)	119.0	-1.8	239.4	0.052	132.5	-13.7	279.2	0.074	0.035 - 0.122
random terms	**posterior mean**	**lower CI**	**upper CI**		**posterior mean**	**lower CI**	**upper CI**		
bird ID	558.7	262.2	880.8		560.9	284.4	923.8		
life-cycle stage	1077.0	263.0	2375.0		1099.0	376.9	2870.6		
study	1379.0	199.4	3129.0		1297.0	309.1	3705.1		
species	670.9	112.9	1566		716.9	190.5	2107.8		
phylogenetic variance					1175.0	233.6	4065.7		
residual variance	1282.0	1059.0	1520.0		1281.0	1066.4	1534.5		