

Fig. S1. Rectal body temperatures recorded immediately after the completion of summit metabolic rate measurements in wild-caught African striped mice, *Rhabdomys pumilio*. The horizontal line in each box plot is the median value, the boxes define the 25th-75th percentiles, the whiskers define 10th-90th percentiles and black circles represent values beyond those percentiles.

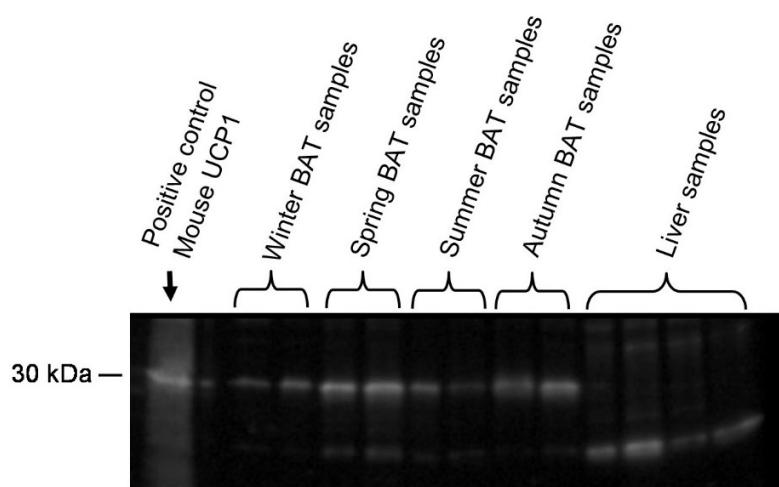


Fig. S2. Representative western blot analysis of uncoupling protein (UCP) 1 expression in brown adipose tissue (BAT) homogenate and liver homogenate of wild-caught African striped mice, *Rhabdomys pumilio*

Table S1. Comparison of mean (\pm s.e.m.) organ mass per season of wild-caught African striped mice, *Rhabdomys pumilio*. Means that do not share a subscripted letter differ significantly from each other.

Organ	Winter	Spring	Summer	Autumn	Model statistics
Liver	3.16 ± 0.18 g ^A	2.82 ± 0.31 g ^B	2.31 ± 0.20 g ^B	2.46 ± 0.13 g ^B	$F_{1,34} = 145.41$, $p < 0.001$
BAT	0.63 ± 0.05 g ^A	0.55 ± 0.08 g ^{A,B}	0.37 ± 0.05 g ^B	0.41 ± 0.03 g ^B	$F_{1,34} = 39.31$, $p < 0.001$
Heart	0.26 ± 0.01 g ^A	0.27 ± 0.02 g ^A	0.22 ± 0.01 g ^B	0.22 ± 0.01 g ^B	$F_{1,34} = 58.00$, $p < 0.001$
Lungs	0.28 ± 0.03 g ^A	0.24 ± 0.01 g ^{A,B}	0.21 ± 0.01 g ^B	0.21 ± 0.01 g ^B	$F_{1,34} = 12.84$, $p = 0.001$
Pancreas	0.46 ± 0.06 g	0.38 ± 0.07 g	0.38 ± 0.06 g	0.32 ± 0.03 g	$F_{1,34} = 2.05$, $p = 0.162$
Kidneys	0.57 ± 0.02 g ^A	0.55 ± 0.04 g ^A	0.41 ± 0.03 g ^B	0.45 ± 0.02 g ^B	$F_{1,34} = 62.75$, $p < 0.001$
Stomach	0.94 ± 0.09 g ^A	0.65 ± 0.05 g ^B	0.53 ± 0.06 g ^B	0.66 ± 0.07 g ^B	$F_{1,34} = 30.08$, $p < 0.001$
Intestines	2.63 ± 0.23 g ^A	1.77 ± 0.16 g ^B	0.92 ± 0.10 g ^C	1.15 ± 0.07 g ^C	$F_{1,34} = 22.92$, $p < 0.001$

Table S2. Correlation between metabolic rate in wild-caught African striped mice, *Rhabdomys pumilio*, and ambient temperatures experienced at the study site. Basal metabolic rate (BMR), non-shivering thermogenesis (NST) and summit metabolic rate (MSUM) were correlated to the average maximum ($T_{\text{a max}}$) and minimum ($T_{\text{a min}}$) temperatures experienced by mice up to five days before capture. Only significant correlations are presented.

		5-day average	4-day average	3-day average	2-day average	1-day			
		T_{max}	T_{min}	T_{max}	T_{min}	T_{max}	T_{min}	T_{max}	T_{min}
Winter	BMR								
	NST								
	M_{SUM}								
Spring	BMR	-0.78**		-0.74*		-0.74*		-0.76*	
	NST								
	M_{SUM}	-0.85**		-0.82**		-0.82**		-0.84**	
Summer	BMR								
	NST	-0.78**		-0.75*					
	M_{SUM}								
Autumn	BMR								
	NST		-0.75*		-0.77**		-0.76*		-0.73*
	M_{SUM}		-0.84**		-0.85**		-0.85**		-0.83**

** $p < 0.01$; * $p < 0.05$