

Disparate roost sites drive intraspecific physiological variation in a Malagasy bat

Stephanie Reher, Hajatiana Rabarison, B. Karina Montero, James M. Turner and Kathrin H. Dausmann

Table S1. Detailed test-statistics of t-tests and Wilcoxon tests regarding the forearm length, body mass and body condition during torpid states of bats roosting in a cave during the dry and wet season as well as a forest in the wet season. Significance was adjusted through Bonferroni-Holm correction; bold values represent significant results.

Variables tested	Test-statistics	p-value
<i>Forearm length females</i>		
Cave dry season vs. cave wet season	$W = 21$	0.529
Cave dry season vs. forest wet season	$W = 0$	< 0.001
Cave wet season vs. forest wet season	$W = 0$	< 0.001
<i>Forearm length males</i>		
Cave dry season vs. cave wet season	$W = 11$	0.914
Cave dry season vs. forest wet season	$W = 0$	0.012
Cave wet season vs. forest wet season	$W = 0$	0.004
<i>Body mass females</i>		
Cave dry season vs. cave wet season	$W = 28$	1
Cave dry season vs. forest wet season	$W = 26.5$	1
Cave wet season vs. forest wet season	$W = 31$	1
<i>Body mass males</i>		
Cave dry season vs. cave wet season	$W = 15$	0.61
Cave dry season vs. forest wet season	$W = 2$	0.059
Cave wet season vs. forest wet season	$W = 10$	0.061
<i>Body condition females</i>		
Cave dry season vs. cave wet season	$t = 0.213$	0.835
Cave dry season vs. forest wet season	$t = 4.26$	0.009
Cave wet season vs. forest wet season	$t = 4.24$	0.005
<i>Body condition males</i>		
Cave dry season vs. cave wet season	$t = 0.273$	1
Cave dry season vs. forest wet season	$t = 0.200$	1
Cave wet season vs. forest wet season	$t = -0.160$	1

Table S2. Rayleigh's test statistics, including sample sizes (N = individuals, n = pooled bouts across all individuals), describing the timing of entry into, and arousal from, extended and micro-torpor bouts in each season and roost site. ns indicates event timing that did not differ from a random distribution; bold values represent significant results.

	Time of day	Test-statistics (<i>r</i>)	<i>p</i> -value	Sample size
Extended torpor				
Cave, dry season, entry	ns	0.25	0.3234	N = 6, n = 19
Cave, dry season, arousal	ns	0.33	0.1537	
Cave, wet season, entry	09:21 ± 00:40 h	0.80	0.006	N = 6, n = 7
Cave, wet season, arousal	14:54 ± 00:29 h	0.89	0.001	
Forest, wet season, entry	10:23 ± 00:12 h	0.91	< 0.001	N = 14, n = 22
Forest, wet season, arousal	16:56 ± 00:17 h	0.96	< 0.001	
Micro-torpor				
Cave, dry season, entry	ns	0.05	0.2787	N = 9, n = 538
Cave, dry season, arousal	ns	0.06	0.1403	
Cave, wet season, entry	12:58 ± 00:05 h	0.34	< 0.001	N = 14, n = 475
Cave, wet season, arousal	13:18 ± 00:07 h	0.34	< 0.001	
Forest, wet season, entry	09:28 ± 00:09 h	0.20	< 0.001	N = 16, n = 456
Forest, wet season, arousal	09:43 ± 00:11 h	0.20	< 0.001	

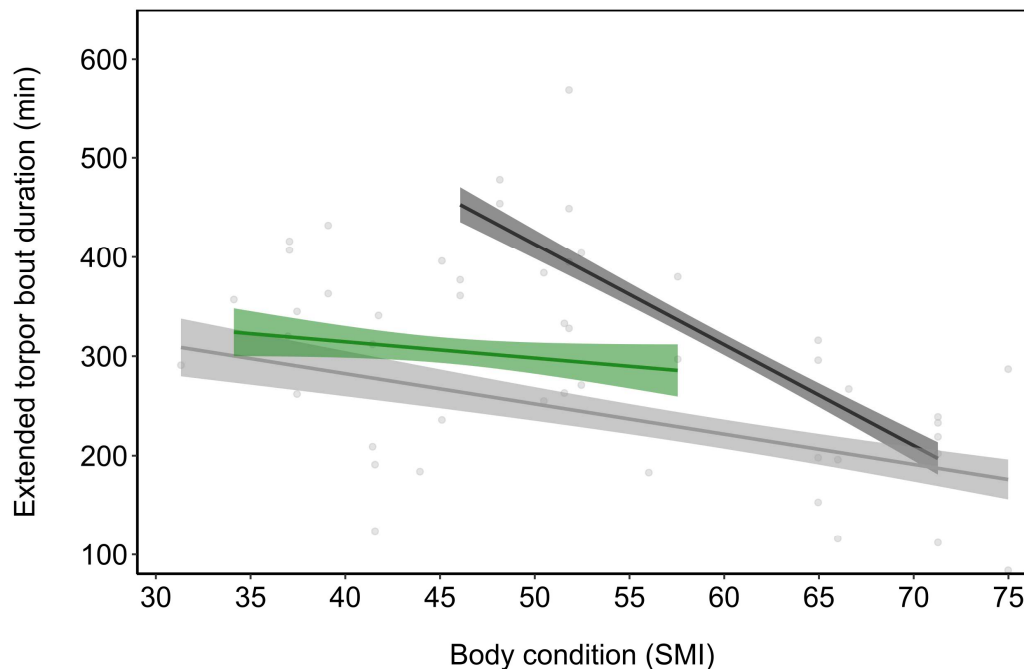


Figure S1. Estimated duration of extended torpor bouts (min) with 95% confidence interval (shaded area) as a function of body conditions (given as standardised mass index) of forest-dwelling bats (green) as well as cave-dwelling bats in the dry (dark grey) and wet season (light grey).