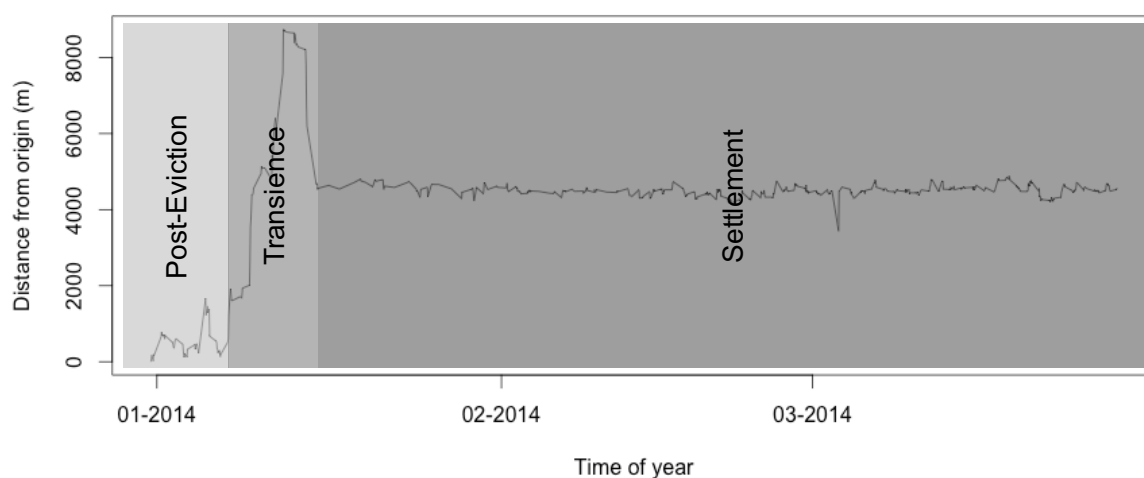


Supplementary information

Figure S1. Net displacement curve of dispersing meerkats

Characteristic dispersal curve of a dispersing coalition of female meerkats quantified by net displacement (distance to natal site). The post-eviction phase starts after the eviction event and is characterized by typical territorial movement patterns, where coalitions remain in the natal territory and distances covered per day resemble those of the natal group. Emigration marks the beginning of transience, where coalitions cover farther distances per day and move away from the natal site. The time of settlement can clearly be identified by a change to territorial movement patterns.

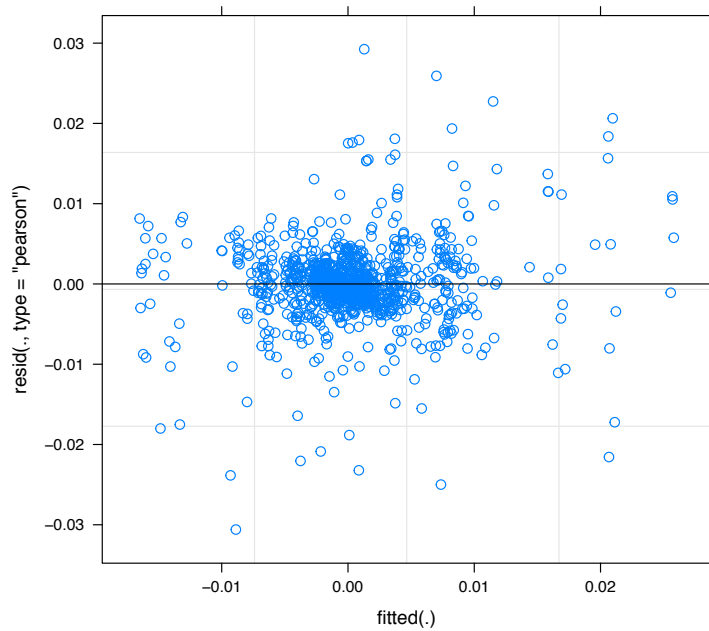


Variations in NSD over time can be used to characterize transitions from one dispersal stage to the next. For each dispersing coalition, we calculated the NSD as the square of the Euclidean distance from the place of eviction to any given GPS location along the entire dispersal path. We then visually investigated the resulting NSD plots for inflection points (Cozzi et al. 2016)¹, which corresponded to time of emigration and time of settlement. We used field observations to validate results from the NSD approach. Successful emigration was typically characterized by unidirectional exploratory movements and lack of attempts to reunite with the natal group. Successful settlement coincided with the use of the same sleeping burrow for extended periods (>1 week) accompanied by normal foraging behaviour resembling territorial behaviour.

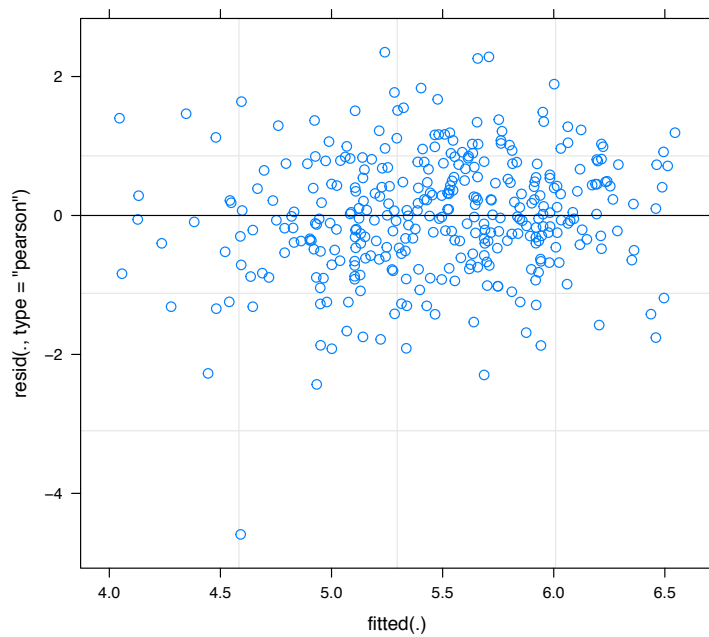
¹ Cozzi, G., M. Chynoweth, J. Kusak, E. Çoban, A. Çoban, A. Ozgul, and Ç. H. Şekercioğlu. 2016. Anthropogenic food resources foster the coexistence of distinct life history strategies: year-round sedentary and migratory brown bears. *Journal of Zoology* 300:142–150.

Figure S2. Residuals diagnostics for statistical models

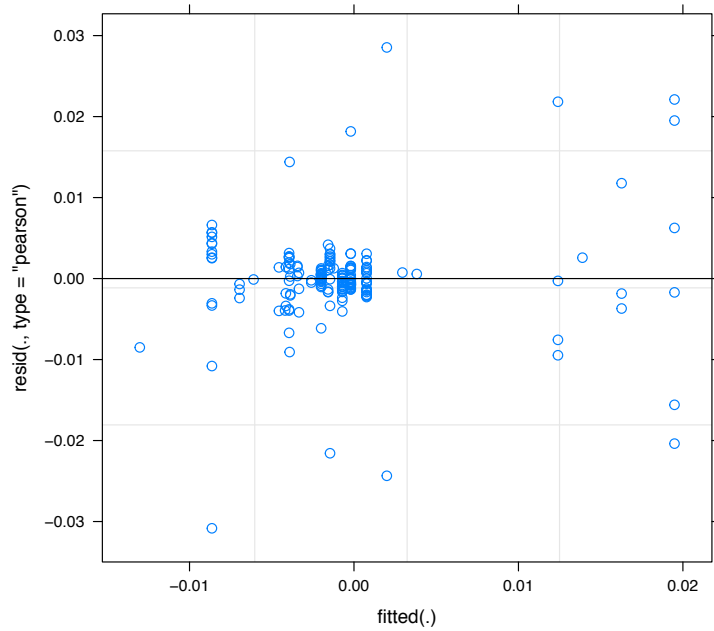
Linear mixed effects **model 1a**: Comparison of net proportional daily mass change among emigrants, returners, and residents.



Linear mixed effects **model 1b**: Comparison of faecal glucocorticoid metabolite (fGCM) concentrations among emigrants, returners, and residents.



Linear mixed effects **model 2a**: Variation in net proportional daily mass change between post-eviction and transience stages in emigrants.



Linear mixed effects **model 2b**: Variation in faecal glucocorticoid metabolite (fGCM) concentrations between post-eviction and transience stages in emigrants.

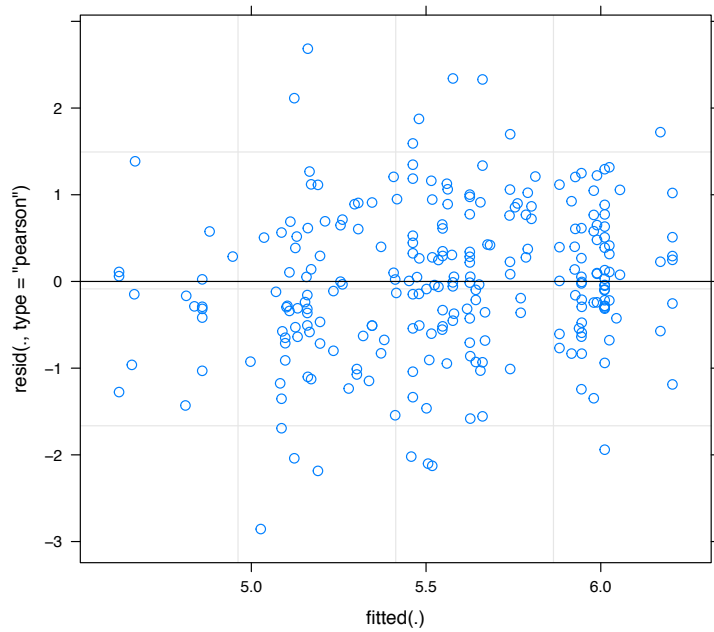


Table S1. Linear mixed effects model *Ia*: Comparison of net proportional daily mass change among emigrants, returners, and residents.

Upper table: Description of full statistical model. **Lower table:** Results from model selection based on Akaike's information criterion (subset of models with $\Delta\text{AICc} < 2$ and Null model); DF = degrees of freedom; AICc = AIC for small sample sizes; ΔAICc = difference to best statistical model based on AICc; W = Akaike weights across models with $\Delta\text{AICc} < 2$.

Response	Fixed	Variable description	Random
$(m_t - m_0)/(m_0 * \Delta t)$	m_0	Body mass at day of eviction	<i>indID</i>
	Δt	Days since eviction	nested in
	<i>age</i>	Age in months	<i>coalID</i>
	$age^{1/2}$	Account for non-linear growth of individuals <2 years	
	<i>rain</i>	Rain sum of previous 3 months	
	<i>temp</i>	Maximum daily temperature	
	<i>#pup</i>	Number of dependent offspring <3 months age	
	<i>strategy</i>	Female strategy; Factor: Resident, Returner, Emigrant	
	<i>#female</i>	Average number of females in group, dispersing coalition, respectively	
	<i>strategy:#female</i>		
	<i>strategy:m0</i>		

Variable	DF	AICc	ΔAICc	W
$m_0 + temp + age^{1/2} + \#female + strategy + strategy:m_0$	12	-7519.55	0.00	0.11
$m_0 + temp + age + \#female + strategy + strategy:m_0$	12	-7519.31	0.24	0.09
$m_0 + temp + rain + age^{1/2} + \#female + strategy + strategy:m_0$	13	-7518.77	0.78	0.07
$m_0 + temp + rain + age + \#female + strategy + strategy:m_0$	13	-7518.53	1.02	0.06
$m_0 + \Delta t + temp + age^{1/2} + \#female + strategy + strategy:m_0$	13	-7518.49	1.06	0.06
$m_0 + \Delta t + temp + age + \#female + strategy + strategy:m_0$	13	-7518.42	1.13	0.06
$m_0 + temp + age^{1/2} + \#female$	8	-7518.42	1.14	0.06
$m_0 + temp + age + \#female$	8	-7518.27	1.28	0.06
$m_0 + temp + age + \#female + strategy + strategy:m_0 + strategy:\#female$	14	-7518.20	1.35	0.05
$m_0 + \Delta t + temp + rain + age^{1/2} + \#female + strategy + strategy:m_0$	14	-7518.15	1.40	0.05
$m_0 + temp + rain + age^{1/2} + \#female$	9	-7518.1	1.42	0.05
$m_0 + \Delta t + temp + rain + age + \#female + strategy + strategy:m_0$	14	-7518.1	1.43	0.05
$m_0 + temp + age^{1/2} + \#female + strategy + strategy:m_0 + strategy:\#female$	14	-7518	1.52	0.05
$m_0 + temp + rain + age + \#female$	9	-7518	1.56	0.05
$m_0 + \Delta t + temp + rain + age + \#female$	10	-7517.7	1.83	0.04
$m_0 + temp + age^{1/2} + \#female + \#pup + strategy + strategy:m_0$	13	-7517.7	1.85	0.04
$m_0 + \Delta t + temp + rain + age^{1/2} + \#female$	10	-7517.7	1.87	0.04
<i>Null</i>	4	-7473.41	46.14	-

Table S2. Linear mixed effects model *1b*: Comparison of faecal glucocorticoid metabolite (fGCM) concentrations among emigrants, returners, and residents.

Upper table: Description of full statistical model. **Lower table:** Results from model selection based on Akaike's information criterion (subset of models with $\Delta\text{AICc} < 2$ and Null model); DF = degrees of freedom; AICc = AIC for small sample sizes; ΔAICc = difference to best statistical model based on AICc; W = Akaike weights across models with $\Delta\text{AICc} < 2$.

Response	Fixed	Variable description	Random
<i>log(fGCM)</i>	<i>collect</i>	Collection time; Factor: Morning, Afternoon	<i>indID</i>
	<i>preg</i>	Pregnancy; Factor: 1 = Pregnant, 0 = Not pregnant	nested in
	<i>Δt</i>	Days since eviction	<i>coalID</i>
	<i>age</i>	Age in months	
	<i>rain</i>	Rain sum of previous 3 months	
	<i>temp</i>	Maximum daily temperature	
	<i>strategy</i>	Female strategy; Factor: Resident, Returner, Emigrant	
	<i>#female</i>	Average number of females in group, dispersing coalition, respectively	
		<i>strategy:#female</i>	

Variable	DF	AICc	ΔAICc	W
<i>collect+preg+Δt+temp+#female+strategy</i>	11	974.23	0.00	0.47
<i>collect+preg+Δt+temp+age+#female+strategy</i>	12	975.28	1.05	0.28
<i>collect+preg+Δt+temp+strategy</i>	10	975.53	1.30	0.25
<i>Null</i>	4	1005.93	31.70	-

Table S3. Linear mixed effects model 2a: Variation in net proportional daily mass change between post-eviction and transience stages in emigrants.

Upper table: Description of full statistical model. **Lower table:** Results from model selection based on Akaike's information criterion (subset of models with $\Delta AICc < 2$ and Null model); DF = degrees of freedom; AICc = AIC for small sample sizes; $\Delta AICc$ = difference to best statistical model based on AICc; W = Akaike weights across models with $\Delta AICc < 2$.

Response	Fixed	Variable description	Random
$(m_t - m_0)/(m_0 * \Delta t)$	m_0	Body mass at day of eviction	<i>indID</i>
	Δt	Days since start of stage (Post-eviction, Transience)	nested in
	<i>age</i>	Age in months	<i>coalID</i>
	$age^{1/2}$	Account for non-linear growth of individuals <2 years	
	<i>rain</i>	Rain sum of previous 3 months	
	<i>temp</i>	Maximum daily temperature	
	<i>stage</i>	Dispersal stage; Factor: Post-Eviction, Transience	
	<i>#female</i>	Average number of females in dispersing coalitions	
	<i>male</i>	Male presence; Factor: Male present, Male absent	
	<i>status:#female</i>		

Variable	DF	AICc	$\Delta AICc$	W
<i>m₀</i>	5	-1369.66	0.00	0.3
<i>m₀+stage</i>	6	-1368.63	1.03	0.18
<i>m₀+temp</i>	6	-1368.21	1.45	0.15
<i>m₀+rain</i>	6	-1367.87	1.78	0.12
<i>Null</i>	4	-1367.86	1.80	0.12
<i>m₀+#female</i>	6	-1367.82	1.84	0.12

Table S4. Linear mixed effects model *2b*: Variation in faecal glucocorticoid metabolite (fGCM) concentrations between post-eviction and transience stages in emigrants.

Upper table: Description of full statistical model. **Lower table:** Results from model selection based on Akaike's information criterion (subset of models with $\Delta\text{AICc} < 2$ and Null model); DF = degrees of freedom; AICc = AIC for small sample sizes; ΔAICc = difference to best statistical model based on AICc; W = Akaike weights across models with $\Delta\text{AICc} < 2$.

Response	Fixed	Variable description	Random
<i>log(fGCM)</i>	<i>collect</i>	Collection time; Factor: Morning, Afternoon	<i>indID</i>
	<i>preg</i>	Pregnancy; Factor: 1 = Pregnant, 0 = Not pregnant	nested in
	Δt	Days since start of stage (Post-eviction, Transience)	<i>coalID</i>
	<i>age</i>	Age in months	
	<i>rain</i>	Rain sum of previous 3 months	
	<i>temp</i>	Maximum daily temperature	
	<i>stage</i>	Dispersal stage; Factor: Post-Eviction, Transience	
	<i>#female</i>	Average number of females in dispersing coalition	
	<i>male</i>	Male presence; Factor: Male present, Male absent	
	<i>stage:#female</i>		

Variable	DF	AICc	ΔAICc	W
<i>collect+preg+stage</i>	7	698.82	0.00	0.26
<i>collect+preg+temp+rain+stage</i>	9	699.16	0.34	0.22
<i>collect+preg+rain+stage</i>	8	699.19	0.37	0.22
<i>collect+preg+temp+stage</i>	8	699.49	0.67	0.19
<i>collect+preg+age+stage</i>	8	700.57	1.75	0.11
<i>Null</i>	4	714.89	16.07	-