

**Supplementary Information**

**Physiological response of a wild rodent to experimental manipulations in its natural environment using infrared thermography**

Y.G. Zevgolis, S.P. Zannetos, T. Akriotis

Table S1: Descriptive statistics of  $T_{max}$  for different subsets of the data according to sex, trapping history and breeding condition for each experimental manipulation of EMP and for every minute during TRP.

EMP													
Groups	n	$T_{BW}$		$T_{CL}$		$T_{HBL}$		$T_{HFL}$		$T_{TL}$		$T_{EL}$	
		mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD
Males	50	32.83	2.17	32.41	2.29	31.49	2.19	31.82	2.42	31.68	2.50	31.91	2.39
Females	53	32.68	1.58	32.55	1.71	31.76	1.63	32.04	1.51	31.93	1.55	32.21	1.79
First Captures	27	33.09	1.59	32.84	1.92	31.70	1.98	31.92	2.14	31.81	2.19	31.80	2.27
All Recaptures	76	32.63	1.97	32.35	2.03	31.60	1.91	31.94	1.95	31.81	2.03	32.16	2.03
1 <sup>st</sup> Recapture	22	31.68	1.80	31.25	1.88	30.60	1.79	31.16	1.90	31.17	2.04	31.49	2.05
2 <sup>nd</sup> Recapture	19	33.27	2.00	32.72	1.94	31.91	1.98	32.25	2.05	32.27	1.98	32.46	1.97
3 <sup>rd</sup> Recapture	14	32.86	2.01	32.94	2.15	32.21	1.89	32.54	2.34	32.06	2.52	32.36	2.53
Breeding	53	32.08	1.81	31.93	1.84	30.97	1.77	31.29	1.92	31.17	1.90	31.55	2.05
Non-breeding	50	33.47	1.69	33.06	2.03	32.33	1.84	32.62	1.86	32.49	2.02	32.62	2.02

TRP													
Groups	n	$T_{60}$		$T_{120}$		$T_{180}$		$T_{240}$		$T_{300}$			
		mean	SD	mean	SD	mean	SD	mean	SD	mean	SD	mean	SD
Males	50	29.19	1.97	29.27	1.82	29.38	1.84	29.58	1.87	30.12	1.86		
Females	53	29.30	1.59	29.38	1.59	29.62	1.46	29.94	1.55	30.40	1.59		
First Captures	27	29.23	1.49	28.99	1.54	29.18	1.39	29.69	1.46	30.27	1.49		
All Recaptures	76	29.25	1.88	29.45	1.75	29.62	1.73	29.79	1.81	30.26	1.81		
1 <sup>st</sup> Recapture	22	28.91	1.76	29.14	1.65	29.28	1.69	29.61	1.76	30.14	1.85		
2 <sup>nd</sup> Recapture	19	29.86	1.86	30.01	1.80	30.07	1.78	30.23	1.85	30.89	1.80		
3 <sup>rd</sup> Recapture	14	29.21	2.42	29.39	1.97	29.46	2.00	29.66	2.21	29.98	2.20		
Breeding	53	28.89	1.78	28.90	1.71	29.12	1.64	29.33	1.64	29.84	1.60		
Non-breeding	50	29.62	1.71	29.78	1.58	29.91	1.59	30.22	1.69	30.71	1.75		

Table S2: Parameter estimates for the selected SARIMA models for the full dataset and its different subsets.

A. <i>mystacinus</i>								
Groups	Model	Coefficients	Estimate	SD	z-statistic	-value	CI (2.5%, 97.5%)	
All Captures	(0,0,1)(0,1,0)[103]	ma1	-0.79	$2.08 \times 10^{-2}$	-38.23	<0.05	-0.83--0.75	
		drift	$1.03 \times 10^{-5}$	$6.86 \times 10^{-5}$	0.15	ns	$-1.24 \times 10^{-4}$ — $-1.45 \times 10^{-4}$	
First Captures	(0,0,1)(2,1,0)[27]	ma1	-0.67	0.049	-13.58	<0.05	-0.77--0.57	
		sar1	-0.32	0.064	-4.97	<0.05	-0.44--0.19	
		sar2	-0.02	0.06	-0.36	ns	-0.15--0.10	
All Recaptures	(0,0,1)(1,1,0)[76]	ma1	-0.81	0.002	-36.74	<0.05	-0.85--0.76	
		sar1	-0.25	0.003	-6.95	<0.05	-0.33--0.18	
1 <sup>st</sup> Recapture	(0,0,1)(2,1,0)[22]	ma1	-0.64	0.06	-10.75	<0.05	-0.76--0.52	
		sar1	-0.28	0.07	-3.86	<0.05	-0.43--0.14	
		sar2	-0.13	0.07	-1.86	<0.05	-0.28--0.008	
2 <sup>nd</sup> Recapture	(0,0,1)(0,1,1)[19]	ma1	-0.72	0.05	-14.45	<0.05	-0.82--0.62	
		sma1	-0.36	0.07	-4.90	<0.05	-0.51--0.21	
3 <sup>rd</sup> Recapture	(1,0,1)(0,1,1)[14]	ar1	0.06	0.12	0.53	<0.05	-0.18--0.32	
		ma1	-0.72	0.09	-8.01	<0.05	-0.89--0.54	
		sma1	-0.41	0.09	-4.37	<0.05	-0.59--0.22	

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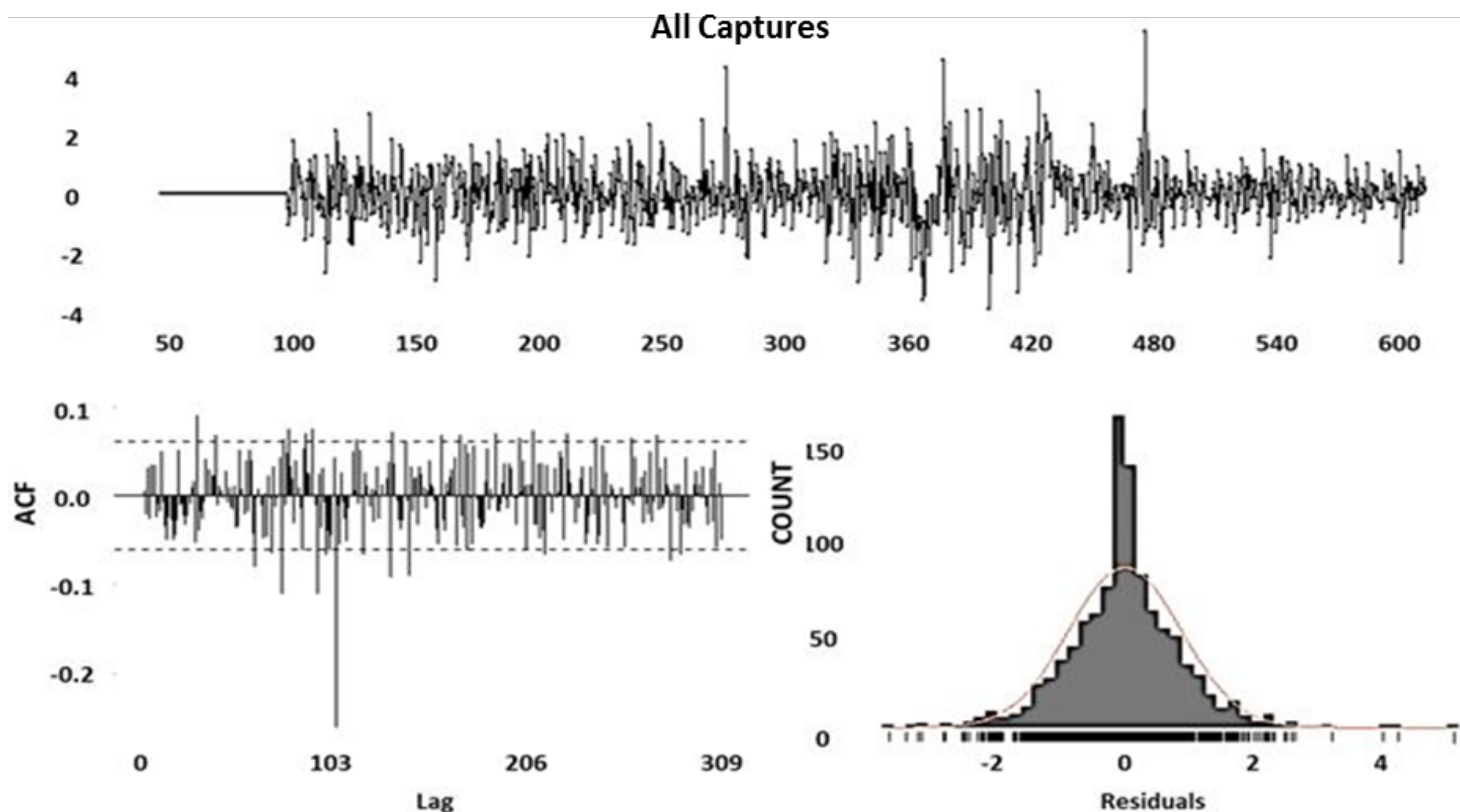


Figure S3: Residual check for the all captures model  $(0,0,1)(0,1,0)[103]$ .

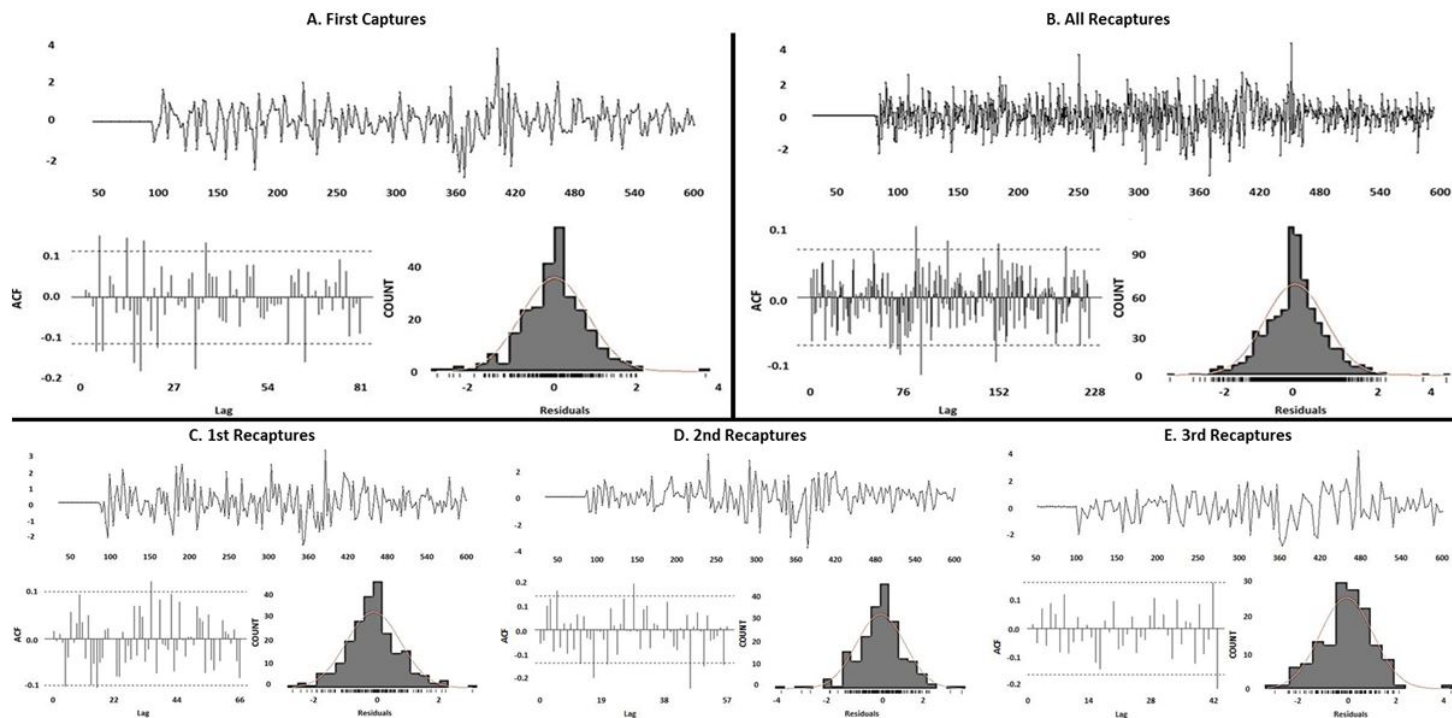


Figure S4: Residual check for final models, A. First captures –  $(0,0,1)(2,1,0)[27]$ , B. All Recaptures –  $(0,0,1)(1,1,0)[76]$ , C. 1<sup>st</sup> Recaptures –  $(0,0,1)(2,1,0)[22]$ , D. 2<sup>nd</sup> Recaptures –  $(0,0,1)(0,1,1)[19]$ , and E. 3<sup>rd</sup> Recaptures –  $(1,0,1)(0,1,1)[14]$ .

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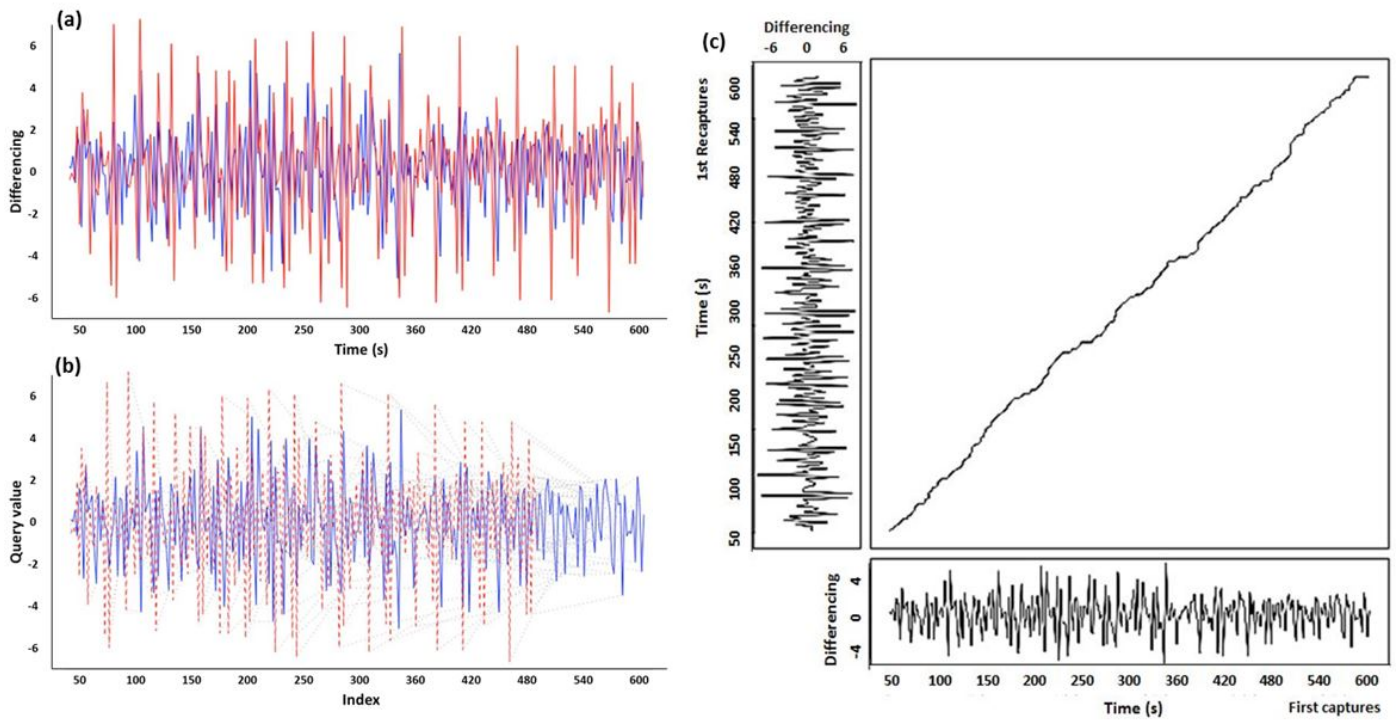


Figure S5: Mapping of the stationary sequences First Captures (blue) and 1<sup>st</sup> Recaptures (red); (a) the two time series plotted together, (b) the step pattern object which lists the allowed transitions in parallel with minimum-distance search, which characterizes the matching model, and (c) the minimum-distance warp path plotted in a three way form.

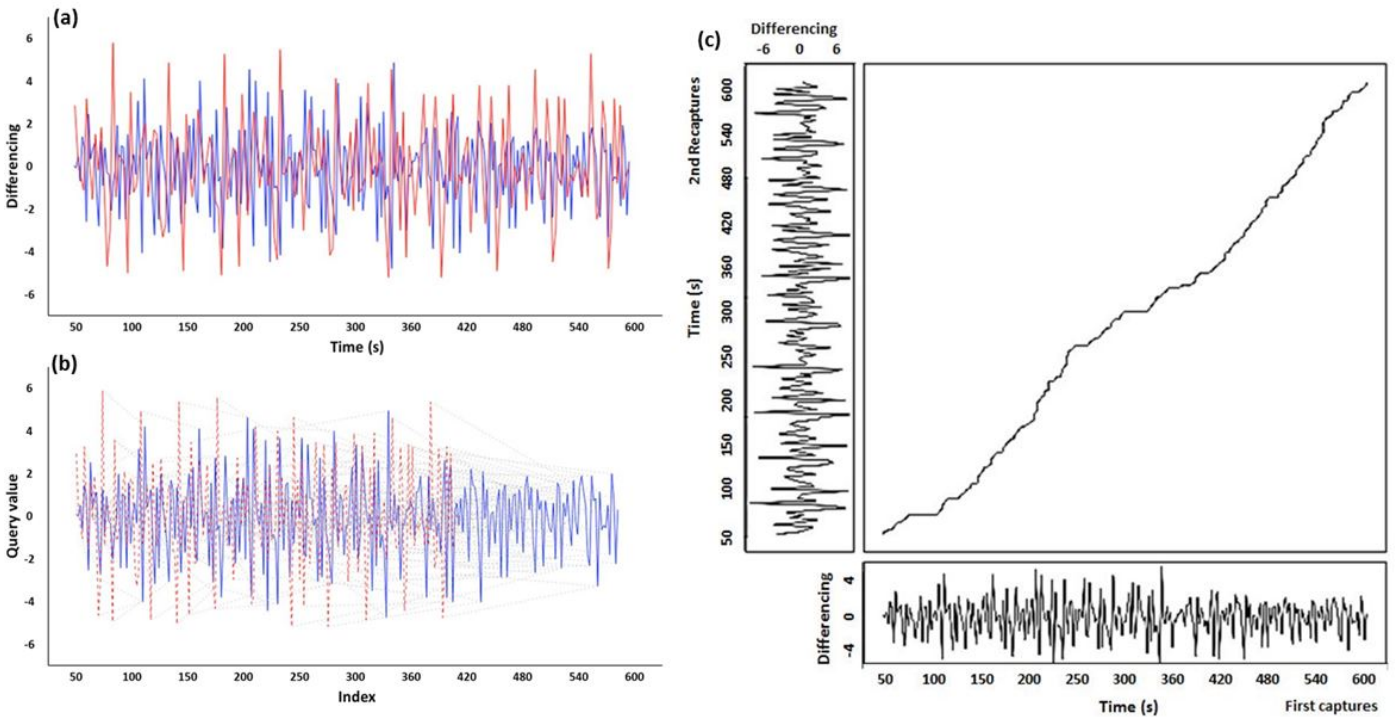


Figure S6: Mapping of the stationary sequences for First Captures (blue) and 2<sup>nd</sup> Recaptures (red); (a) the two time series plotted together, (b) the step pattern object which lists the allowed transitions in parallel with minimum-distance search, which characterizes the matching model, and (c) the minimum-distance warp path plotted in a three way form.

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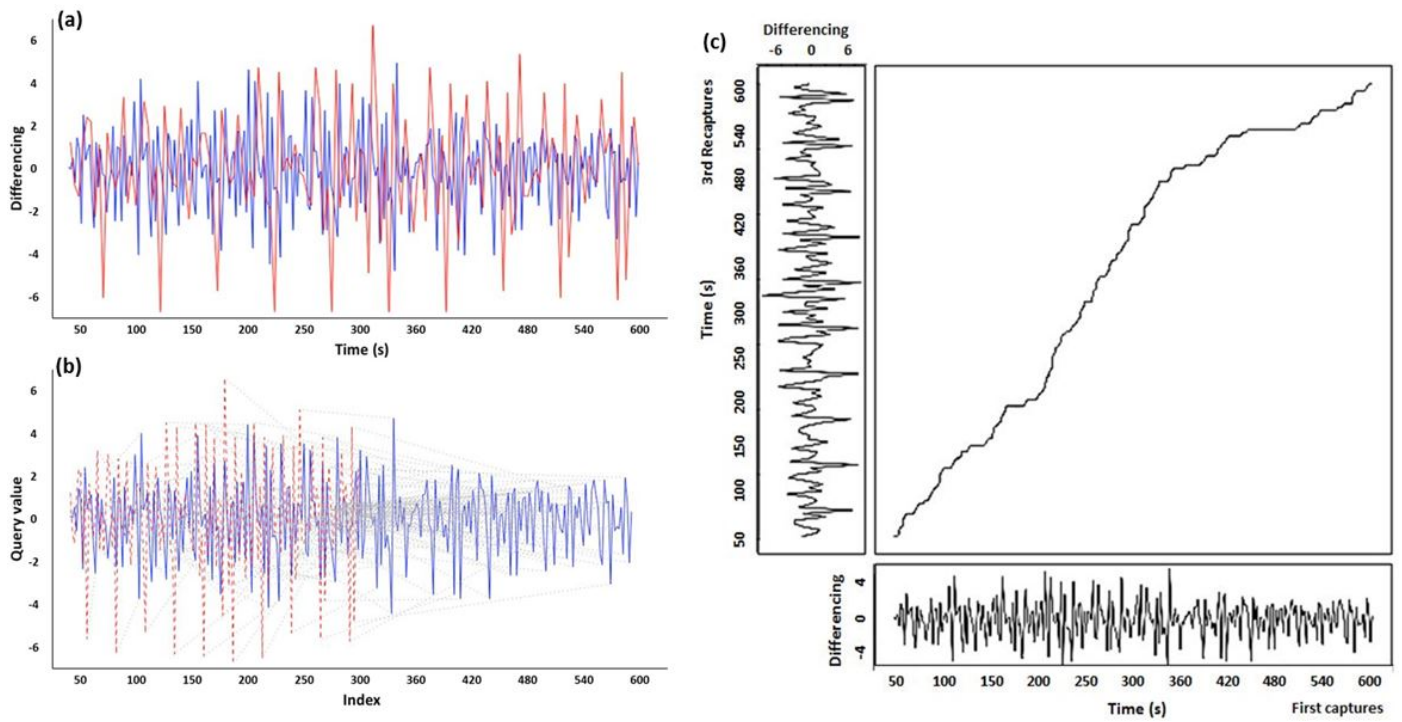


Figure S7: Mapping of the stationary sequences First Captures (blue) and 3<sup>rd</sup> Recaptures (red); (a) the two time series plotted together, (b) the step pattern object which lists the allowed transitions in parallel with minimum-distance search, which characterizes the matching model, and (c) the minimum-distance warp path plotted in a three way form.