

Schmidt, N. M., van Beest, F., Mosbacher, J. B., Stelvig, M., Hansen, L. H., Nabe-Nielsen, J. and Grøndahl, C. 2016. Ungulate movement in an extreme seasonal environment: year-round movement patterns of high-arctic muskoxen. – Wildlife Biology doi: 10.2981/wlb.00219.

Appendix 1

Table A1. Summary of model autocorrelation functions and random intercepts. Overview of the temporal autocorrelation functions and random intercepts included in all of our mixed-effects generalized additive models on muskox movement data from high-arctic Greenland.

Season	Parameter	CorAr1	Random intercept	
			SD	Residual
Increasing light	speed	0.502	0.030	1.745
	linearity	0.071	0.845	55.050
	activity	0.432	0.424	4.751
Light	speed	0.257	0.260	1.586
	linearity	0.045	1.057	53.606
	activity	0.139	0.908	5.566
Increasing darkness	speed	0.382	0.0002	1.682
	linearity	0.081	0.003	54.189
	activity	0.260	0.363	5.464
Darkness	speed	0.439	0.002	1.572
	linearity	0.057	1.702	54.603
	activity	0.437	0.507	5.174

Table A2. Association matrix. The temporal association between the 14 individual muskoxen tracked in high-arctic Greenland. Numbers show the percentage of simultaneous positions where two individuals were less than 100 m apart. This threshold was based on Schmidt et al. (2015).

ID	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14
#1														
#2	0.88													
#3	0.02	0.03												
#4	0.00	0.78	0.60											
#5	0.00	0.00	0.72	0.08										
#6	0.00	0.00	2.31	0.12	0.00									
#7	0.02	0.00	0.00	1.74	6.22	0.00								
#8	0.00	0.07	0.11	0.30	0.49	0.00	0.00							
#9	0.01	0.20	1.43	0.42	0.75	2.44	0.00	0.00						
#10	0.04	0.00	0.35	0.10	0.14	0.20	0.00	0.00	0.00					
#11	0.56	2.69	0.00	2.86	0.34	0.00	0.00	0.03	0.29	1.86				
#12	0.01	2.47	0.00	0.82	0.27	0.00	0.00	2.54	0.47	0.00	0.84			
#13	0.00	0.00	0.00	0.19	0.43	0.00	0.00	0.00	0.11	0.09	0.00	0.00		
#14	0.08	1.17	0.00	0.25	0.37	0.00	0.00	0.00	9.10	0.00	0.67	0.12	0.12	

Reference

Schmidt, N. M. et al. 2015. Long-term patterns of muskox (*Ovibos moschatus*) demographics in high arctic Greenland. – Polar Biol. 38: 1667–1675.