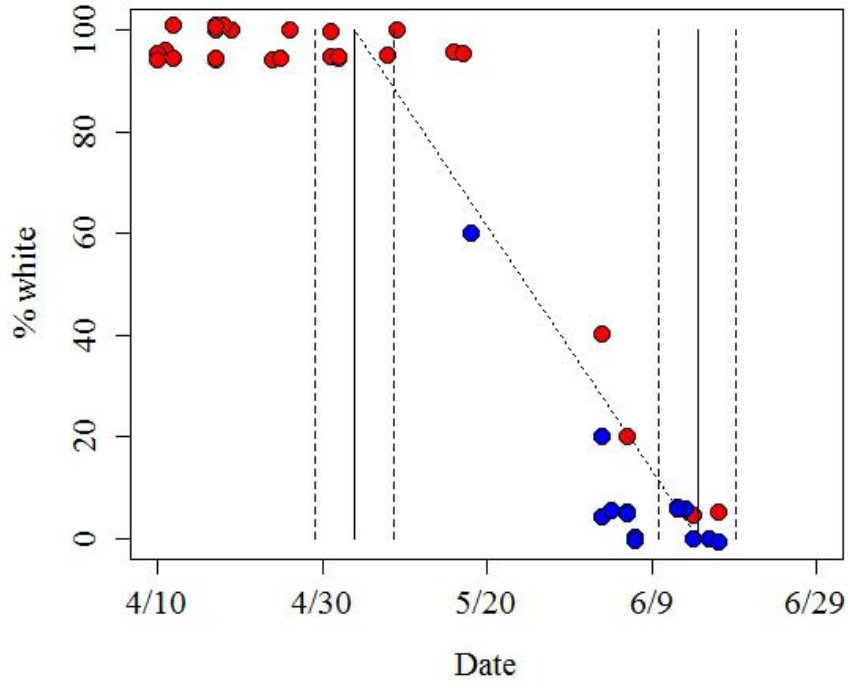


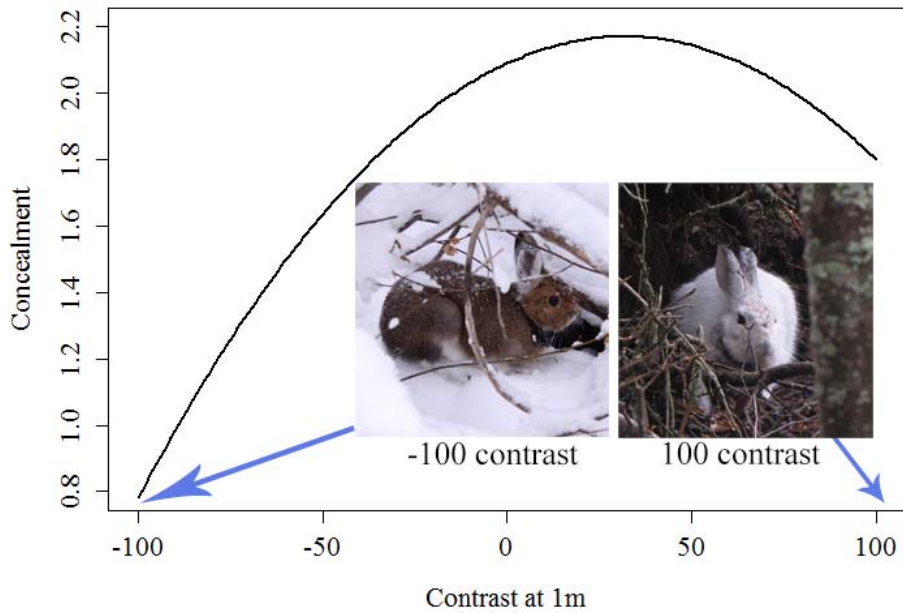
Electronic Supplemental Material:



S1. Spring 2012 phenology data from Gardiner study site. Dots represent coat colour observations of hares radiocollared during the previous seasons (red dots) and in May and June 2012 (blue dots). Vertical black full lines show estimated mean initiation and completion dates with 95% credible intervals (dashed black lines) based on the change point analysis. Dotted black line shows estimated slope of the change.

S2. Set of best models tested to explain variation in concealment (Conc) for hares at the Gardiner and Seeley Lake sites, MT (9/17/2009 – 7/9/2012). AIC_c Wt stands for AIC_c weight, and LL for log likelihood.

#	Model	K	AIC_c	ΔAIC_c	AIC_c Wt	LL
1	Conc ~ Season + Site + Contrast1m + Contrast1m ²	9	2122.85	0.00	0.35	-1052.30
2	Conc ~ Season + Site + Contrast 1m + Contrast 1m ² + Snow10m	10	2124.70	1.86	0.14	-1052.19
3	Conc ~ Season + Site + Contrast 1m + Contrast 1m ² + Whiteness	10	2124.77	1.93	0.13	-1052.23
4	Conc ~ Season + Site + Contrast 1m + Contrast 1m ² + Snow1m	10	2124.77	1.93	0.13	-1052.23



S3. Effect of colour contrast within 1-m radius on hares' concealment at the Gardiner and Seeley Lake study sites, MT (9/17/2009 – 7/9/2012). Relationship is based on coefficients from the best model according to AIC (see the electronic supplementary material S4).

S4. Effects of season, site and colour contrast at 1 m (Contrast1m) on concealment (Conc) according to the best model. 95% HPD are the 95% highest posterior density intervals for the coefficients. Variables with statistically significant effects are identified by two asterisks (**).

Conc ~ Season + Site +			
Contrast1m + Contrast1m²	Coefficient	SD	95% HDP
Season (spring)	-0.13	0.15	(-0.46, 0.099)
Season (summer)**	1.00	0.26	(0.45, 1.47)
Season (fall)**	0.33	0.11	(0.11, 0.54)
Site (Seeley Lake)**	0.43	0.12	(0.23, 0.65)
Contrast1m**	0.0051	0.0021	(0.0012, 0.0092)
Contrast1m ² **	-0.000085	0.000026	(-0.00014, -0.000036)

S5. The best models tested to explain variation in FID for hares at the Gardiner and Seeley

Lake sites, MT. Conc is concealment. AIC_c Wt stands for AIC_c weight, and LL for log

likelihood.

#	Model	K	AIC_c	ΔAIC_c	AIC_c Wt	LL
1	FID ~ Conc + Sex + Site + Season + Mismatch10m	8	1577.35	0.00	0.15	-780.42
2	FID ~ Conc + Sex + Site + Season + Mismatch10m + Snow1m	9	1577.63	0.27	0.13	-779.48
3	FID ~ Conc + Sex + Site + Season + Contrast1m	7	1577.99	0.64	0.11	-781.79
4	FID ~ Conc + Sex+ Site + Season + AbsMismatch10m	7	1578.62	1.27	0.080	-782.11
5	FID ~ Conc + Sex+ Site + Season + AbsMismatch10m + Snow1m	8	1578.69	1.34	0.080	-781.08
6	FID ~ Conc + Sex + Site + Season + Mismatch10m + Whiteness	9	1579.28	1.93	0.060	-780.31

S6. Effects of concealment (Conc), sex, site, season, and colour mismatch at 10-m radius (Mismatch10m) around hares on flight initiation distance (FID) according to the best model. Variables with statistically significant effects are identified by two asterisks (**).

Model: FID ~ Conc + Sex + Site + Season + Mismatch10m	Hazard		
	Ratio	P-value	95% CI
Conc**	1.26	0.00059	(1.10, 1.44)
Sex (female)	1.06	0.73	(0.77,1.45)
Site (Seeley Lake)**	1.89	0.0054	(1.21, 2.97)
Season (spring)	0.88	0.64	(0.53, 1.47)
Season (summer)**	0.21	0.00054	(0.086, 0.51)
Season (fall)	1.17	0.54	(0.71, 1.95)
Mismatch10m (positive)	1.62	0.14	(0.85, 3.07)
Mismatch10m (negative)**	5.62	0.0014	(1.95, 16.18)