

Orning, E. K. and Young, J. K. 2017. Coyote removal: can the short-term application of a controversial management tool improve female greater sage-grouse survival or nest success. – Wildlife Biology 2017: wlb.00345.

Appendix 1

Table A1.1. Causes of female greater sage-grouse mortality at two sites with different predator management over a baseline data collection year (2011) and at three sites with different coyote removal efforts (2012) as a prescribed treatment in Bighorn Basin, Wyoming, USA.

Predator	No removal		Non-targeted removal		Targeted removal	
	2011	2012	2011	2012	2011	2012
Coyotes	5	1	-	1	0	1
Badger	2	0	-	0	0	0
Golden eagle	1	0	-	1	0	0
Raptor (unidentified spp.)	0	4	-	3	0	1
Canid (unidentified spp.)	0	1	-	0	0	0
Human ^a	0	0	-	1	0	0
Unidentified	1	1	-	0	3	3
Total	9	7	-	6	3	5

^a Hay swather.

Table A1.2. Causes of greater sage-grouse nest failure at two sites with different predator management over a baseline data collection year (2011) and at three sites with different coyote removal efforts (2012) as a prescribed treatment in Bighorn Basin, Wyoming, USA.

Predator	No removal		Non-targeted removal		Targeted removal	
	2011	2012	2011	2012	2011	2012
Coyotes	2	0	-	3	3	3
Raven	2	0	-	1	1	3
Bobcat	1	0	-	0	0	0
Skunk	0	1	-	0	0	0
Red fox	0	1	-	0	0	0
Abandon	0	1	-	0	0	1
Unidentified ^a	2	0	-	0	2	3
Hen mortality	3	0	-	0	1	0
Total	10	3	-	4	7	10

^a Predator was not identified from trail camera photos, lab forensics, or sign at the scene.

Table A1.3. Model selection results for the daily survival rate (DSR) of sage-grouse nests at two sites with different predator management over baseline data collection year in Bighorn Basin, Wyoming, USA (2011). Models are ranked according to Akaike's information criterion corrected for small sample sizes (AIC_c).

Model ^a	Name	K^b	AIC_c	ΔAIC_c	w_i^c	Likelihood
S(.)	Constant DSR (Null)	1	62.122	0.000	0.437	1.000
S(T)	Date	2	63.170	1.049	0.259	0.592
S(g)	Site	2	63.703	1.581	0.198	0.454
S(g + T)	Site + Date	3	64.946	2.825	0.106	0.244

^a (g) refers to the site (Oregon Basin, Polecat Bench) based on the level of predator management (no removal, non-targeted coyote removal); T is a linear time trend; and (.) is constant survival.

^b No. of parameters in model.

^c Akaike weight.

Table A1.4. Estimated coefficient values for fixed effect nest models of the daily survival rate of sage-grouse nests at two sites with different predator management over a baseline data collection year in Bighorn Basin, Wyoming, USA (2011). The fixed effect coefficient estimates (β), standard error (SE), and confidence intervals (CI) are shown for daily survival rate (DSR) over baseline year (2011).

Parameter	β	SE	90% CI
Date ^a	0.012	0.012	-0.008, 0.032
Site ^b	-0.512	0.744	-1.736, 0.712

^a Linear time trend (T)

^b Site: Oregon Basin (no removal) or Polecat Bench (non-targeted coyote removal)