

**Table S1.** Total nest predators removed from Bashaw and Viking trapped sites, 2015–2017.

Species	2015		2016		2017		Total
	Bashaw	Bashaw	Viking	Bashaw	Viking		
<b>Coyote</b>	14	64	33	35	16	162	
Franklin's Ground Squirrel	0	0	0	0	11	11	
Red Fox	0	0	1	3	0	4	
Raccoon	1	0	1	0	1	3	
Skunk	20	20	28	31	43	142	
Badger*	4	1	0	0	0	5	
Raven	18	95	5	54	32	204	
Magpie	25	28	3	63	77	196	
Crow	43	63	0	43	63	212	
Long-tailed weasel*	0	1	0	0	0	1	
<b>Total</b>	<b>125</b>	<b>272</b>	<b>71</b>	<b>229</b>	<b>243</b>	<b>940</b>	

\*incidental

**Table S2.** Summary of wildlife trail cameras deployed at individual nests and predator species photographed.

Study area & year	N <sup>1</sup>	n <sup>2</sup>	Predator species
Bashaw 2016	8	3	Striped skunk, black-billed magpie American crow or common raven Striped skunk Unidentified corvid
Bashaw 2017	15	5	Striped skunk, black-billed magpie Long-tailed weasel (post-hatch) Unidentified furbearer (possibly weasel) Long-tailed weasel Striped skunk, 13-lined ground squirrel, unidentified rodent
Viking 2016	9	4	13-lined ground squirrel Striped skunk Striped skunk, 13-lined ground squirrel
Viking 2017	3	0	N/A

<sup>1</sup>N = individual nests with cameras  
<sup>2</sup>n = nests with predator photographed

**Table S3.** RMark nest survival models for daily survival rates of duck nests ( $n = 830$ ) on plots where predator removal was transposed over >2 years in central Alberta parklands in 2015–2017, ranked by corrected Akaike's Information Criterion (AICc).

Model	K <sup>1</sup>	AICc <sup>2</sup>	ΔAICc <sup>3</sup>	w <sub>i</sub> <sup>4</sup>	Deviance
S(~-1 + treatment:StudyArea:year)	10	2093.94	0.00	1.00	2073.91
S(~-1 + treatment:year)	6	2160.84	66.90	0.00	2148.83
S(~-1 + StudyArea:year)	5	2166.58	72.64	0.00	2156.57
S(~-1 + AgeDay1 + StudyArea:year)	6	2168.15	74.21	0.00	2156.14
S(~year)	3	2179.72	85.78	0.00	2173.72
S(~AgeDay1 + year)	4	2181.72	87.78	0.00	2173.71
S(~StudyArea)	2	2186.03	92.09	0.00	2182.03
S(~treatment)	2	2186.13	92.19	0.00	2182.13
S(~Time * Time)	2	2193.44	99.49	0.00	2189.43
S(~Time)	2	2193.44	99.49	0.00	2189.43
S(~AgeFound)	2	2204.64	110.70	0.00	2200.64
S(~1)	1	2204.96	111.02	0.00	2202.96
S(~AgeDay1)	2	2206.76	112.82	0.00	2202.76

<sup>1</sup>K = number of model parameters

<sup>2</sup>AICc = Akaike information criterion corrected for small sample sizes

<sup>3</sup>ΔAICc = difference in AIC value from top model

<sup>4</sup>w<sub>i</sub> = model weight

**Table S4.** Daily survival rate (DSR) and standard error (SE) derived from top-performing RMark nest survival model for daily survival rates of duck nests on plots where predator removal was transposed over >2 years in central Alberta parklands in 2015–2017.

Study Area/Year/Treatment	DSR <sup>1</sup>	SE <sup>2</sup>
Bashaw 2015 Control	0.9623486	0.0080840
Bashaw 2016 Control	0.9640390	0.0077220
Viking 2016 Control	0.9471145	0.0077928
Bashaw 2017 Control	0.9487335	0.0052604
Viking 2017 Control	0.8527007	0.0121859
Bashaw 2015 Trapped	0.9639663	0.0065871
Bashaw 2016 Trapped	0.9530781	0.0056207
Viking 2016 Trapped	0.9492815	0.0059268
Bashaw 2017 Trapped	0.9318947	0.0130123
Viking 2017 Trapped	0.9653167	0.0056134

<sup>1</sup>DSR = daily survival rate  
<sup>2</sup>SE = standard error

**Table S5.** RMark nest survival models for daily survival rates of duck nests on plots where predator removal was transposed over >2 years in central Alberta parklands in 2015–2017, excluding Viking Control 2017 plots. Ranked by corrected Akaike's Information Criterion (AICc).

Model	K <sup>1</sup>	AICc <sup>2</sup>	ΔAICc <sup>3</sup>	w <sub>i</sub> <sup>4</sup>	Deviance	Beta Value
S(~-1 + StudyArea:year)	5	1803.43	0	0.26	1793.42	+
S(~AgeFound)	2	1803.79	0.36	0.22	1799.79	+
S(~Time * Time)	2	1805.20	1.77	0.11	1801.20	-/+
S(~Time)	2	1805.20	1.77	0.11	1801.20	-/+
S(~-1 + AgeDay1 + StudyArea:year)	6	1805.43	2.00	0.10	1793.42	-/+
S(~1)	1	1806.50	3.07	0.06	1804.50	
S(~year)	3	1807.11	3.68	0.04	1801.11	
S(~treatment)	2	1808.32	4.88	0.02	1804.31	
S(~AgeDay1)	2	1808.39	4.95	0.02	1804.38	
S(~StudyArea)	2	1808.51	5.07	0.02	1804.50	
S(~-1 + treatment:StudyArea:year)	9	1808.53	5.10	0.02	1790.51	
S(~AgeDay1 + year)	4	1808.96	5.52	0.02	1801.00	
S(~-1 + treatment:year)	6	1811.85	8.42	0.00	1799.84	

<sup>1</sup>K = number of model parameters  
<sup>2</sup>AICc = Akaike information criterion corrected for small sample sizes  
<sup>3</sup>ΔAICc = difference in AIC value from top model  
<sup>4</sup>w<sub>i</sub> = model weight

**Table S6.** Counts of depredated nesting hens (*n* = 27) by species and treatment plot on which they were found.

Species	Control	Predator Removal
American green-winged teal	1	0
American widgeon	0	1
Blue-winged teal	3	10
Gadwall	3	1
Northern shoveler	2	6