

APPENDICES

Table S1. Top habitat selection models ($\Delta AIC_c \leq 2$) for all individuals ($n = 63$ individuals; 408 used points). All fixed and random variables reported and shown if preferred (bolded in green) or avoided (bolded and italicized in red) by shrikes. Number of parameters (K), AIC_c , delta AIC_c (ΔAIC_c), and AIC_c weight reported for model comparisons. All models included PointID and BirdID as random effects.

Model	k	AIC_c	ΔAIC_c	AIC_c Weight
NULL	3	1137.25	172.05	9.60e-39
Year	4	1139.27	174.07	3.50e-39
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500 + <i>Soy500</i>	11	966.24	1.05	0.13
Year + PerchH5 + Water11 + Crops11 + Ditches100 + GrassH100 + Wire250 + Develop500 + Cotton500	12	966.90	1.70	0.09
Year + PerchH5 + Water11 + Crops11 + Ditches100 + GrassH100 + Wire250 + Develop500 + <i>Soy500</i>	12	965.39	0.20	0.20
Year + PerchH5 + Water11 + Ditches100 + GrassH100 + Wire250 + Develop500	10	965.97	0.78	0.15
Year + PerchH5 + Water11 + Ditches100 + Wire250 + Develop500 + Cotton500	10	966.52	1.32	0.11
Year + PerchH5 + Water11 + Ditches100 + Wire250 + Develop500 + <i>Soy500</i>	10	965.19	0.00	0.22
Year + PerchH5 + Water11 + Ditches100 + Wire250 + Develop500 + Fallow500	10	966.92	1.72	0.09

Table S2. Top habitat selection models ($\Delta AIC_c \leq 2$) for male individuals ($n = 42$ individuals; 261 used points). All fixed and random variables reported and shown if preferred (bolded in green) or avoided (bolded and italicized in red) by shrikes. Number of parameters (K), AIC_c , delta AIC_c (ΔAIC_c), and AIC_c weight reported for model comparisons. All models included PointID and BirdID as random effects.

Model	k	AIC_c	ΔAIC_c	AIC_c Weight
NULL	3	729.69	95.79	2.01e-22
Year	4	731.72	97.83	7.27e-23
Year + PerchH5 + Water11 + Crops11 + Wire250 + Develop500	9	635.63	1.73	0.05
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500	11	634.37	0.47	0.10
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500	10	634.07	0.17	0.12
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500 + Cotton500	11	635.17	1.27	0.07
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500 + <i>Soy500</i>	11	633.90	0.00	0.13
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500 + Fallow500	11	635.04	1.14	0.07
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + Develop500 + Forest500	11	634.94	1.04	0.08
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500 + Cotton500	12	635.45	1.55	0.06
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500 + <i>Soy500</i>	12	633.94	0.05	0.12
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500 + Fallow500	12	635.25	1.35	0.06
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500 + Forest500	12	634.96	1.06	0.07
Year + PerchH5 + Water11 + Crops11 + Ditches100 + Wire250 + GrassH250 + Develop500	11	635.21	1.31	0.07

Table S3. Top habitat selection models ($\Delta AIC_c \leq 2$) for female individuals ($n = 21$ individuals; 147 used points). All fixed and random variables reported and shown if preferred (bolded in green) by shrikes. Number of parameters (K), AIC_c , delta AIC_c (ΔAIC_c), and AIC_c weight reported for model comparisons. All models included PointID and BirdID as random effects.

Model	k	AIC_c	ΔAIC_c	AIC_c Weight
NULL	3	413.65	79.67	1.06e-18
Year	4	415.71	81.73	3.78e-19
Year + PerchH5 + Water11 + Crops11 + Wire250 + Develop500 + Fallow500	10	335.47	1.49	0.10
Year + PerchH5 + Water11 + Crops11 + Wire250 + NatPerches250 + Develop500 + Fallow500	11	335.51	1.53	0.10
Year + PerchH5 + Water11 + Crops11 + Wire250 + AnthroPerces250 + Develop500 + Fallow500	11	335.63	1.65	0.09
Year + PerchH5 + Water11 + Wire250 + Develop500 + Fallow500	9	334.55	0.57	0.16
Year + PerchH5 + Water11 + Wire250 + NatPerces250 + Develop500 + Fallow500	10	334.81	0.83	0.14
Year + PerchH5 + Water11 + Wire250 + AnthroPerces250 + Develop500 + Fallow500	10	333.98	0.00	0.21
Year + PerchH5 + Water11 + Wire250 + Ditches250 + Develop500 + Fallow500	10	335.35	1.37	0.11
Year + PerchH5 + Water11 + GrassW100 + Wire250 + AnthroPerces250 + Develop500 + Fallow500	11	335.63	1.65	0.09

Table S4. Top habitat selection models ($\Delta AIC_c \leq 2$) for hatching-year/second-year individuals (HY/SY; $n = 28$ individuals; 101 used points). All fixed and random variables reported and shown if preferred (bolded in green) by shrikes. Number of parameters (K), AIC_c , delta AIC_c (ΔAIC_c), and AIC_c weight reported for model comparisons. All models included PointID and BirdID as random effects.

Model	k	AIC_c	ΔAIC_c	AIC_c Weight
NULL	3	729.69	90.84	4.72e-21
Year	4	731.72	92.87	1.71e-21
Year + PerchH5 + Water11 + Crops11 + AnthroPerch100 + Wire250 + NatPerches250 + Develop500	11	639.27	0.42	0.20
Year + PerchH5 + Water11 + Crops11 + AnthroPerch100 + Wire250 + Ditches250 + Develop500	11	639.50	0.65	0.18
Year + PerchH5 + Water11 + Crops11 + AnthroPerch100 + Wire250 + DitchW250 + Develop500	11	639.47	0.62	0.18
Year + PerchH5 + Water11 + Crops11 + AnthroPerch100 + Wire250 + GrassW250 + Develop500	11	639.50	0.65	0.18
Year + PerchH5 + Water11 + Crops11 + AnthroPerch100 + Wire250 + GrassH250 + Develop500	11	638.85	0.00	0.25

Table S5. Top habitat selection models ($\Delta AIC_c \leq 2$) for after-hatching-year/after-second-year individuals (AHY/ASY; $n = 42$ individuals/307 used points). All fixed and random variables reported and shown if preferred (bolded in green) by shrikes. Number of parameters (K), AIC_c , delta AIC_c (ΔAIC_c), and AIC_c weight reported for model comparisons. All models included PointID and BirdID as random effects.

Model	k	AIC_c	ΔAIC_c	AIC_c Weight
NULL	3	857.224	133.700	4.81e-30
Year	4	859.250	135.727	1.75e-30
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + NatPerch250 + Develop500 + Fallow500	13	724.712	1.188	0.29
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + DitchW250 + Develop500 + Fallow500	13	725.487	1.963	0.19
Year + PerchH5 + Water11 + Crops11 + GrassH100 + Ditches100 + Wire250 + Develop500 + Fallow500	12	723.524	0.000	0.52