

Appendix 1.

Table A1. Comparison of different logistic regression techniques on revealing meaningful habitat variables (β_x having $P \leq 0.1$) as they affect probability of occurrence eight grassland-shrubland bird species in central Texas. Table also shows AIC values and the means of the absolute values of the deviance residuals. The conditional logistic regression algorithm did not converge on a solution for YBCU.

Species	Parameter	Regression technique [†]		
		Logistic on prop. years	Logistic on p/a	Conditional logistic on p/a
BEWR	Canopy cover	yes	yes	yes
	Canopy cover ²	yes	no	yes
	Canopy height	no	no	no
	Canopy height ²	no	no	no
	B-J difference	yes	yes	no
	B-J difference ²	yes	yes	no
	AIC	612.0	339.9	260.7
	Mean residual	0.485	0.632	0.751
CASP	Canopy cover	no	no	no
	Canopy cover ²	yes	yes	no
	Canopy height	yes	yes	no
	Canopy height ²	no	yes	no
	B-J difference	no	no	no
	B-J difference ²	no	no	no
	AIC	141.4	291.7	166.3
	Mean residual	0.312	0.544	0.322
FISP	Canopy cover	yes	yes	yes
	Canopy cover ²	no	no	no
	Canopy height	yes	yes	no
	Canopy height ²	yes	yes	yes
	B-J difference	yes	yes	yes
	B-J difference ²	yes	yes	no
	AIC	293.7	418.9	271.4
	Mean residual	0.462	0.757	0.461
LASP	Canopy cover	no	no	no
	Canopy cover ²	yes	no	no
	Canopy height	no	no	no
	Canopy height ²	no	no	no
	B-J difference	no	no	no
	B-J difference ²	no	no	no
	AIC	354.0	587.3	486.9
	Mean residual	0.466	1.033	0.618
NOBO	Canopy cover	no	no	yes
	Canopy cover ²	yes	no	yes

	Canopy height	yes	yes	yes
	Canopy height ²	no	yes	yes
	B-J difference	no	yes	no
	B-J difference ²	no	yes	no
	AIC	312.8	564.9	310.7
	Mean residual	0.531	0.992	0.612
PABU	Canopy cover	yes	no	no
	Canopy cover ²	yes	yes	no
	Canopy height	no	no	no
	Canopy height ²	no	no	no
	B-J difference	no	no	no
	B-J difference ²	no	no	no
	AIC	587.7	215.5	149.1
	Mean residual	0.496	0.432	0.582
RCSP	Canopy cover	yes	yes	yes
	Canopy cover ²	no	yes	yes
	Canopy height	no	no	no
	Canopy height ²	no	no	no
	B-J difference	no	no	no
	B-J difference ²	no	no	no
	AIC	71.8	377.0	289.7
	Mean residual	0.322	0.705	0.506
YBCU	Canopy cover	no	no	—
	Canopy cover ²	no	no	—
	Canopy height	no	no	—
	Canopy height ²	no	no	—
	B-J difference	no	no	—
	B-J difference ²	no	yes	—
	AIC	184.9	562.5	—
	Mean residual	0.415	0.988	—

† For each regression technique as applied to the full models, “yes” and “no” refer to whether the habitat variable had a regression coefficient (β_x) with $P \leq 0.1$.