

Appendix 1. Candidate models for 15 species in old growth and younger pine forest stands. See Table 1 for predictor variable acronyms.

K is the number of model parameters (number of variables + 2) used in calculation of AIC. Note that K may change for global model if a variable drops out. TSF is the trend surface function used in the models.

Black-and-white Warbler (BAWW)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x		x	x		x
	medlpin	x			x	x	
	conba	x	x	x		x	x
	deciba	x	x		x		x
	totalba	x		x		x	
FRI	fixage	x	x	x		x	x
Ecosite	ecosite	x	x		x		
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5

K 11 7 7 7 7 8
 TSF lat2

Blue-headed Vireo (BHVI)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x	x		x
	medlpin	x		x		x	
	conba	x	x		x		x
	deciba						
	totalba	x		x	x		
FRI	fixage	x	x		x	x	x
Ecosite	ecosite	x	x	x		x	
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5

K 11 8 8 8 7 8
 TSF latcorr lgccorr

Blackburnian Warbler (BLBW)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treeden	supcan	x	x	x	x		x
	medlpin	x		x		x	
	conba	x	x		x	x	
	deciba	x		x			x
	totalba	x	x				
FRI	fixage	x	x	x		x	
Ecosite	ecosite	x			x	x	
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5

K 11 7 7 6 7 6
 TSF lgccorr, lg2

Brown Creeper (BRCR)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treeden	supcan	x	x	x	x		
	medlpin	x		x			x
	conba	x	x			x	x
	deciba						
	totalba	x	x		x	x	
FRI	fixage	x	x		x		x
Ecosite	ecosite	x		x		x	
Landscape	mps	x				x	x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5

K 10 7 6 6 7 7
 TSF lat2

Black-throated Green Warbler (BTNW)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x		x	x
	medlpin	x				x	
	conba	x	x	x	x		x
	deciba	x	x		x	x	
	totalba	x		x			
FRI	fixage	x	x		x	x	X
Ecosite	ecosite	x		x	x		
Landscape	mps	x					X
Spatial	trend surface	x	x	x	x	x	X

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5
 K 12 8 8 8 8 8
 TSF lg2, lgcorr

Evening Grosbeak (EVGR)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x		x	x	x	
	medlpin	x				x	
	conba	x	x	x		x	x
	deciba	x	x		x		x
	totalba	x			x		
FRI	fixage	x	x			x	x
Ecosite	ecosite	x		x	x		x
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5
 K 11 6 6 7 7 8
 TSF lglat

Golden-crowned Kinglet (GCKI)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x		x	
	medlpin	x		x			x

	conba	x	x		x		x
	deciba						
	totalba	x	x		x	x	
FRI	fixage	x	x		x		x
Ecosite	ecosite	x		x	x	x	
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5
		K	10	7	6	7	6
		TSF	Lglat				7

Least Flycatcher (LEFL)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape					
Treedden	supcan	x	x				x	x
	medlpin	x						
	conba							
	deciba	x	x		x	x	x	
	totalba	x		x	x		x	
FRI	fixage	x	x		x			
Ecosite	ecosite	x		x	x	x		
Landscape	mps	x						x
Spatial	trend surface	x	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5	
		K	12	8	7	9	8	9
		TSF	latcorr, lgcorr, lg2					

Northern Parula Warbler (NPWA)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape					
Treedden	supcan	x	x	x			x	x
	medlpin	x					x	
	conba	x	x	x	x			
	deciba	x		x	x			x
	totalba	x	x				x	
FRI	fixage	x	x	x			x	
Ecosite	ecosite	x			x			
Landscape	mps	x						x

Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5
	K	11	7	7	6	7	6
	TSF	lgcorr					

Pine Warbler (PIWA)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x		x	x
	medlpin	x		x	x		
	conba						
	deciba						
	totalba	x	x			x	
FRI	fixage	x	x		x		x
Ecosite	ecosite	x		x	x	x	
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5
	K	10	7	7	7	7	7
	TSF	latcorr, lat2					

Pileated Woodpecker (PIWO)

A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x		x	x
	medlpin	x				x	
	conba	x		x	x		x
	deciba	x			x		
	totalba	x	x				x
FRI	fixage	x		x		x	x
Ecosite	ecosite	x	x		x	x	
Landscape	mps	x					x
Spatial	trend surface						
		Global	TR-FRI1	TR-FRI2	TR-FRI3	TR-FRI4	TR-FRI5
	K	10	5	5	5	6	7
	TSF	-					

Red-breasted Nuthatch (RBNU)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x		x			x
	medlpin	x		x	x		x
	conba	x	x		x	x	x
	deciba						
	totalba	x	x	x	x		
FRI	fixage	x		x	x		X
Ecosite	ecosite	x	x	x		x	
Landscape	mps	x					X
Spatial	trend surface	x	x	x	x	x	X

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5

K 11 7 9 8 7 8

TSF lgcorr, lat2

Winter Wren (WIWR)
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x		x		x
	medlpin	x		x	x		
	conba	x	x	x		x	x
	deciba						
	totalba	x		x	x	x	x
FRI	fixage	x	x			x	x
Ecosite	ecosite	x		x	x		
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5

K 13 9 10 10 9 11

TSF latcorr, lglat, lat2, lg2

Species richness
A priori selected variables are in bold text.

Subset	Var	global	Tree density+FRI+ecosite+landscape				
Treedden	supcan	x	x	x		x	
	medlpin	x		x			x

	conba	x			x	x	
	deciba	x			x	x	x
	totalba	x		x			
FRI	fixage	x	x		x		x
Ecosite	ecosite	x		x		x	
Landscape	mps	x					x
Spatial	trend surface						

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5

K 10 4 6 5 6 6

TSF -

Abundance

A priori selected variables are in bold text.

		global	Tree density+FRI+ecosite+landscape				
Subset	Var						
Treedden	supcan	x	x	x		x	
	medlpin	x		x			x
	conba	x			x	x	
	deciba	x			x	x	x
	totalba	x		x			
FRI	fixage	x	x		x		x
Ecosite	ecosite	x		x		x	
Landscape	mps	x					x
Spatial	trend surface	x	x	x	x	x	x

Global TR-FRI1 TR-FRI2 TR-FRI3 TR-FRI4 TR-FRI5

K 12 6 8 7 8 8

TSF latcorr, lg2