

附录1 环境变量的方差膨胀因子
Appendix 1 Variance inflation factor (VIF) values for environmental covariates

环境协变量 Environmental covariates	方差膨胀因子 VIF
相机监测天数 Camera monitoring days	1.11
郁闭度 Canopy closure	1.28
距最近河流距离 Distance to the nearest river	1.69
草本盖度 Herbaceous coverage	1.34
海拔 Altitude	1.54
灌木盖度 Shrub coverage	1.40
竹子盖度 Bamboo coverage	1.37
凋落物 Litter layer	1.76

附录2 多物种占域模型选择结果
Appendix 2 Multi-species occupancy model selection results

假设 Hypothesis	模型 Model	模型选择 Model selection	AICc
1	1-(1)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, 0)$	1149.52
2	2-(1)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, 1)$	1148.41
3	3-(1)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}))$	1144.09
	3-(2)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{herb}))$	1143.27
	3-(3)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{canopy}))$	1142.46
	3-(4)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{bamboo}))$	1140.63
	3-(5)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{altitude}))$	1143.31
	3-(6)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{river}))$	1141.05
	3-(7)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{shrub}))$	1143.02
	3-(8)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}+\text{herb}))$	1145.27
	3-(9)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}+\text{canopy}))$	1144.06
	3-(10)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}+\text{bamboo}))$	1142.47
	3-(11)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}+\text{altitude}))$	1145.30
	3-(12)	$p(\text{day}, 1), \psi(\text{litter}+\text{herb}+\text{shrub}+\text{bamboo}+\text{altitude}+\text{canopy}, \text{canopy}+\text{bamboo}+\text{river}+\text{shrub}+\text{litter}+\text{altitude}, Pr(TT LK) * (\text{litter}+\text{river}))$	1140.10

3-(13)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+shrub}))$	1145.01
3-(14)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{herb+canopy}))$	1143.54
3-(15)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{herb+bamboo}))$	1141.79
3-(16)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{herb+altitude}))$	1144.31
3-(17)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{herb+river}))$	1141.69
3-(18)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{herb+shrub}))$	1143.94
3-(19)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+bamboo}))$	1140.88
3-(20)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+altitude}))$	1144.15
3-(21)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+river}))$	1142.51
3-(22)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+shrub}))$	1143.63
3-(23)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+altitude}))$	1141.90
3-(24)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+river}))$	1140.13
3-(25)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+shrub}))$	1142.62
3-(26)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{altitude+river}))$	1142.47
3-(27)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude,	1145.00

	$Pr(TT LK)*(altitude+shrub))$	
3-(28)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(river+shrub))$	1142.08
3-(29)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+herb+canopy))$	1145.30
3-(30)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+herb+bamboo))$	1143.60
3-(31)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+herb+altitude))$	1146.31
3-(32)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+herb+river))$	1141.26
3-(33)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+herb+shrub))$	1145.86
3-(34)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+canopy+bamboo))$	1142.82
3-(35)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+canopy+altitude))$	1145.78
3-(36)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+canopy+river))$	1141.53
3-(37)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+canopy+shrub))$	1145.51
3-(38)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+bamboo+altitude))$	1143.90
3-(39)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+bamboo+river))$	1142.05
3-(40)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+bamboo+shrub))$	1144.47
3-(41)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+altitude+river))$	1141.53
3-(42)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1147.00

	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+altitude+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	
3-(43)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(litter+river+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1140.70
3-(44)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+canopy+bamboo))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1141.96
3-(45)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+canopy+altitude))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1145.05
3-(46)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+canopy+river))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.16
3-(47)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+canopy+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.38
3-(48)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+bamboo+altitude))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.14
3-(49)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+bamboo+river))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1140.64
3-(50)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+bamboo+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.79
3-(51)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+altitude+river))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1142.95
3-(52)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+altitude+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1145.92
3-(53)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(herb+river+shrub))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1142.87
3-(54)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(canopy+bamboo+altitude))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1141.75
3-(55)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(canopy+bamboo+river))$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1141.34
3-(56)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK)*(canopy+bamboo+shrub))$	1142.88

3-(57)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+altitude+river}))$	1144.19
3-(58)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+altitude+shrub}))$	1145.50
3-(59)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{canopy+river+shrub}))$	1143.82
3-(60)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+altitude+river}))$	1138.81
3-(61)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+altitude+shrub}))$	1143.43
3-(62)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{bamboo+river+shrub}))$	1141.39
3-(63)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{altitude+river+shrub}))$	1144.00
3-(64)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+herb+canopy+river}))$	1142.78
3-(65)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+herb+canopy+shrub}))$	1146.37
3-(66)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+herb+bamboo+altitude}))$	1145.13
3-(67)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+herb+bamboo+river}))$	1142.54
3-(68)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter+herb+bamboo+shrub}))$	1145.58
3-(69)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter + herb + bamboo + canopy}))$	1143.92
3-(70)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) * (\text{litter + herb + Altitude + canopy}))$	1146.84
3-(71)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ canopy+bamboo+river+shrub+litter+altitude,	1142.55

	$Pr(TT LK)*(litter+herb+altitude+river))$	
3-(72)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+herb+altitude+shrub))$	1147.43
3-(73)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+herb+river+shrub))$	1141.57
3-(74)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+bamboo+altitude))$	1143.29
3-(75)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+bamboo+river))$	1143.33
3-(76)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+bamboo+shrub))$	1144.82
3-(77)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+altitude+river))$	1143.29
3-(78)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+altitude+shrub))$	1147.47
3-(79)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+canopy+river+shrub))$	1142.38
3-(80)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+bamboo+altitude+river))$	1140.77
3-(81)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+bamboo+altitude+shrub))$	1145.41
3-(82)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+bamboo+river+shrub))$	1143.39
3-(83)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+altitude+river+shrub))$	1142.68
3-(84)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(litter+herb+canopy+river+shrub))$	1143.02
3-(85)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy, canopy+bamboo+river+shrub+litter+altitude, Pr(TT LK)*(herb+canopy+bamboo+river))$	1141.87
3-(86)	$p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.90

	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+canopy+bamboo+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	
3-(87)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+canopy+altitude+river)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.67
3-(88)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+canopy+altitude+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1146.28
3-(89)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+canopy+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.60
3-(90)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+bamboo+altitude+river)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1139.48
3-(91)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+bamboo+altitude+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.58
3-(92)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+bamboo+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1142.19
3-(93)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (herb+altitude+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.91
3-(94)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (canopy+bamboo+altitude+river)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1140.27
3-(95)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (canopy+bamboo+altitude+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.06
3-(96)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (canopy+bamboo+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1143.02
3-(97)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (canopy+altitude+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1145.64
3-(98)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (bamboo+altitude+river+shrub)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1140.79
3-(99)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (litter+herb+canopy+bamboo+altitude)$ $p(day,1), \psi(litter+herb+shrub+bamboo+altitude+canopy,$	1144.72
3-(100)	canopy+bamboo+river+shrub+litter+altitude, $Pr(TT LK) \cdot (litter+herb+canopy+bamboo+river)$	1143.87

3-(101)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+canopy+bamboo+shrub}))$	1145.89
3-(102)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+canopy+altitude+river}))$	1144.39
3-(103)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+canopy+altitude+shrub}))$	1148.28
3-(104)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+canopy+river+shrub}))$	1143.31
3-(105)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+bamboo+altitude+river}))$	1141.47
3-(106)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+bamboo+altitude+shrub}))$	1146.55
3-(107)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+bamboo+river+shrub}))$	1144.17
3-(108)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+herb+altitude+river+shrub}))$	1143.53
3-(109)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+canopy+bamboo+altitude+river}))$	1142.07
3-(110)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+canopy+bamboo+altitude+shrub}))$	1144.78
3-(111)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+canopy+bamboo+river+shrub}))$	1144.96
3-(112)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+canopy+altitude+river+shrub}))$	1144.35
3-(113)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{litter+bamboo+altitude+river+shrub}))$	1142.70
3-(114)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$ $Pr(TT LK) * (\text{herb+canopy+bamboo+altitude+river}))$	1141.08
3-(115)	$p(\text{day}, 1), \psi(\text{litter+herb+shrub+bamboo+altitude+canopy},$ $\text{canopy+bamboo+river+shrub+litter+altitude},$	1144.22

3-(116)	$Pr(TT LK) \cdot (herb + canopy + bamboo + altitude + shrub)$	1143.74
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(117)	$Pr(TT LK) \cdot (herb + canopy + bamboo + river + shrub)$	1146.57
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(118)	$Pr(TT LK) \cdot (herb + canopy + altitude + river + shrub)$	1141.47
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(119)	$Pr(TT LK) \cdot (herb + bamboo + altitude + river + shrub)$	1142.07
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(120)	$Pr(TT LK) \cdot (canopy + bamboo + altitude + river + shrub)$	1142.99
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(121)	$Pr(TT LK) \cdot (litter + canopy + bamboo + altitude + shrub)$	1146.05
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(122)	$Pr(TT LK) \cdot (litter + herb + canopy + bamboo + altitude + shrub)$	1145.73
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(123)	$Pr(TT LK) \cdot (litter + herb + canopy + bamboo + river + shrub)$	1145.30
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(124)	$Pr(TT LK) \cdot (litter + herb + canopy + altitude + river + shrub)$	1143.44
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(125)	$Pr(TT LK) \cdot (litter + herb + bamboo + altitude + river + shrub)$	1143.96
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(126)	$Pr(TT LK) \cdot (litter + canopy + bamboo + altitude + river + shrub)$	1142.91
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
3-(127)	$Pr(TT LK) \cdot (herb + canopy + bamboo + altitude + river + shrub)$	1144.86
	$p(day, 1), \psi(litter + herb + shrub + bamboo + altitude + canopy, canopy + bamboo + river + shrub + litter + altitude,$	
	$Pr(TT LK) \cdot (litter + herb + canopy + bamboo + altitude + river + shrub)$	

p : 探测协变量; ψ : 占域协变量; AICc: 基于小样本量修正的赤池信息量准则; Pr : 种间相互作用; TT: 红腹角雉; LK: 放牧干扰; day: 相机监测天数; canopy: 郁闭度; river: 距最近河流距离; herb: 草本盖度; altitude: 海拔; shrub: 灌木盖度; litter: 凋落物; bamboo: 竹子盖度。 p , Detection probability; ψ , Occupancy probability; AICc, Akaike information criterion corrected for small sample size; Pr , Interspecific interaction; TT, *Tragopan temminckii*; LK, Livestock; day, Camera monitoring days; canopy, Canopy closure; river, Distance to the nearest river; herb, Herbaceous coverage; altitude, Altitude; shrub, Shrub coverage; litter, Litter layer; bamboo, Bamboo coverage.

附录3 红腹角雉与家畜占域率的种间相互作用及协变量相对重要性
Appendix 3 The relative importance of interspecific interaction and covariates on occupancy probability of the *Tragopan temminckii* and livestock

类型 Type		相互作用物种和 环境协变量 Interacting species and environmental covariates	红腹角雉 <i>Tragopan temminckii</i>	家畜 Livestock
log(OR _{sp})	种间相互作用 Interspecific interaction	红腹角雉 <i>Tragopan temminckii</i>	/	1.40
		家畜 Livestock	1.40	/
log(OR _h)	环境协变量 Environmental covariates	郁闭度 Canopy closure	0.01	0.04
		凋落物 Litter layer	0.04	0.01
		海拔 Altitude	0.00	0.01
		竹子盖度 Bamboo coverage	0.01	0.01
		灌木盖度 Shrub coverage	0.00	0.00
		距最近河流距离 Distance to the nearest river	/	0.01
		草本盖度 Herbaceous coverage	0.03	/