

Supplementary Materials

Table S1. Details of crossing structures on National Highway 44 passing through Pench tiger reserve, Maharashtra.

<i>S.no.</i>	<i>Structure ID</i>	<i>Structure type</i>	<i>Width (m)</i>	<i>Distance to tiger re- serve (m)</i>	<i>Distance to next crossing struc- ture (m)</i>	<i>Number of cam- era traps de- ployed</i>
1.	MNB1	Minor bridge	60	3202	600	3
2.	AUP2	Animal underpass	50	2832	600	2
3.	AUP3	Animal underpass	750	2267	1740	24
4.	MNB4	Minor bridge	80	1263	1578	4
5.	AUP5	Animal underpass	300	0	1578	10
6.	MNB6	Minor bridge	65	0	5800	3
7.	AUP7	Animal underpass	100	0	1800	5
8.	AUP8	Animal underpass	750	0	1800	25
9.	MNB9	Minor bridge	50	0	1800	2

Table S2. Model selection table showing best models with factors explaining prey–predator, predator–prey and prey–dog latencies, with Akaike’s Information Criterion values, difference in AIC (Δ AIC) from the best model, and degrees of freedom (df). Models with AIC < 2 were averaged.

Variables	Prey–predator			logLik
	AIC	ΔAIC	df	
month+ width+ (1 station)	5091.8	0	15	−2530.9
month+ dist_next +width + (1 station)	5092.37	0.57	16	−2530.18
month + str_type + width + (1 station)	5093.23	1.43	16	−2530.62
month + dist_pa + width +(1 station)	5093.55	1.75	16	−2530.78
month+ dist_next + dist_pa + width + (1 station)	5093.77	1.97	17	−2529.88
variables	Predator–prey			logLik
	AIC	ΔAIC	df	
month+ width + (1 station)	5098.1	0	15	−2534.05
month + (1 station)	5098.38	0.28	14	−2535.19
month+ dist_pa + width + (1 station)	5099.87	1.77	16	−2533.94
month+ dist_next + width + (1 station)	5100.01	1.91	15	−2535.05

month + str_type + width+ (1 station)	5100.07	1.97	16	−2534.01
month + dist_next + (1 station)	5100.09	1.99	16	−2534.04
Prey-dog				
variables	AIC	ΔAIC	df	logLik
month+ str_type+ dist_next + width+str_type x dist_next + str_type x width+ (1 station)	22093.13	0	19	−11027.6
month+ str_type +dist_next + dist_pa + width + str_type x dist_next + str_type x width+ (1 station)	22093.81	0.68	20	−11026.9
month + str_type + width + str_type x width+ (1 station)	22094.62	1.49	17	−11030.3
month + str_type +dist_next + dist_pa + width+ str_type x dist_next+ str_type x dist_pa + str_type x width+ (1 station)	22094.76	1.63	21	−11026.4

Table S3. Model-averaged coefficients (β) for models explaining factors affecting prey–predator, predator–prey and prey–dog latencies at crossing structures on NH 44 passing through Pench Tiger Reserve, Maharashtra, India.

Prey–predator		
	β	CI
Intercept	5.78***	0.28
(month)August	−0.27	0.36
(month)December	0.13	0.32
(month)February	−0.62	0.33
(month)January	−0.5	0.35
(month)July	−0.28	0.38
(month)June	−0.11	0.36
(month)March	−0.82*	0.4
(month)May	−0.67	0.41
(month)November	0.23	0.36
(month)October	0.02	0.37
(month)September	0.25	0.37
width	−0.2**	0.07
dist_next	0.03	0.05
(str_type)MNB	0.04	0.17
dist_pa	0.01	0.04
Num. obs.	387	
*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$		
Predator–prey		
	β	CI
Intercept	6***	0.27
(month)August	−0.52	0.34
(month)December	−0.01	0.31
(month)February	−0.85**	0.32
(month)January	−0.47	0.35
(month)July	−0.14	0.36
(month)June	−0.32	0.36
(month)March	−0.04	0.38
(month)May	0.22	0.4
(month)November	0.15	0.35
(month)October	0.33	0.35
(month)September	−0.05	0.35
width	−0.06	0.07
dist_pa	0	0.02
dist_next	0.01	0.03
(str_type)MNB	0	0.1

Num. obs. 374		
*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$		
Prey-dog		
	β	CI
Intercept	5.43***	0.1
(month)August	0.81***	0.15
(month)December	0.56***	0.13
(month)February	0.46***	0.14
(month)January	0.27*	0.13
(month)July	0.67***	0.13
(month)June	0.58***	0.13
(month)March	0.37**	0.13
(month)May	0.48***	0.14
(month)November	0.77***	0.15
(month)October	0.61***	0.14
(month)September	0.67***	0.14
(str_type)MNB	-5.69*	2.46
dist_next	0.23	0.15
Width	-0.12	0.06
(str_type)MNB x dist_next	-0.23	0.16
(str_type)MNB x width	-5.78*	2.41
dist_pa	0.03	0.05
(str_type)MNB x dist_pa	-0.03	0.09
Num. obs.	1602	
*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$		

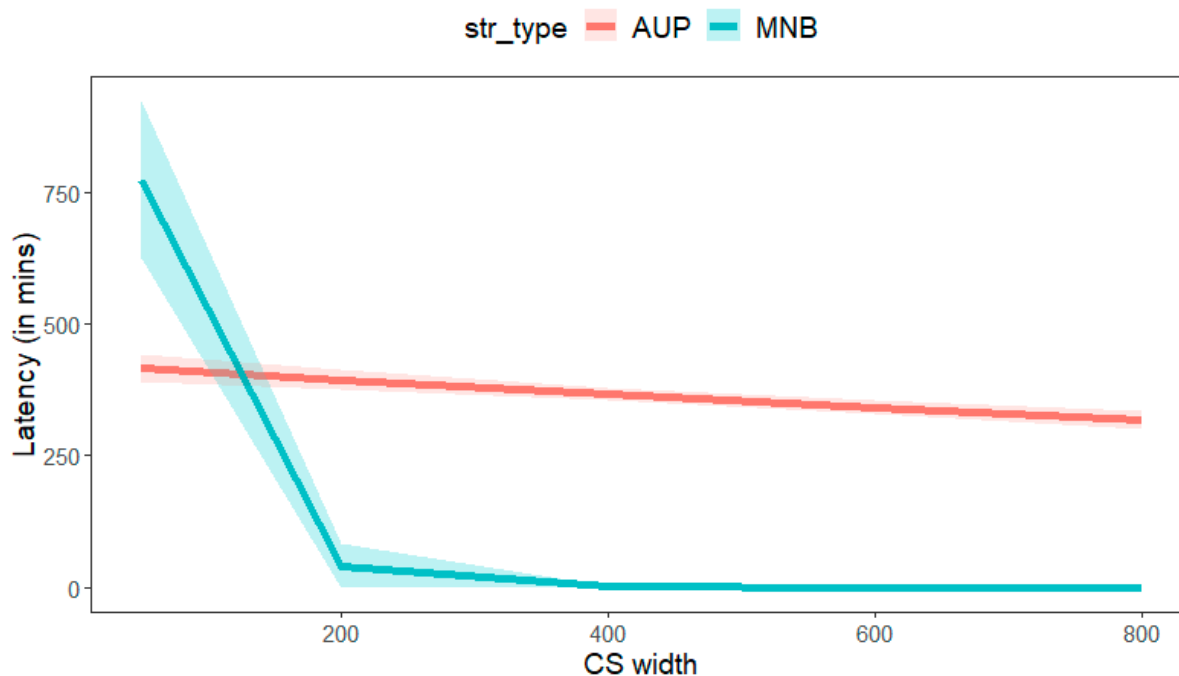


Figure S1. Plot showing the interactive influence of crossing structure type and crossing structure width on geometric mean latencies (in minutes).

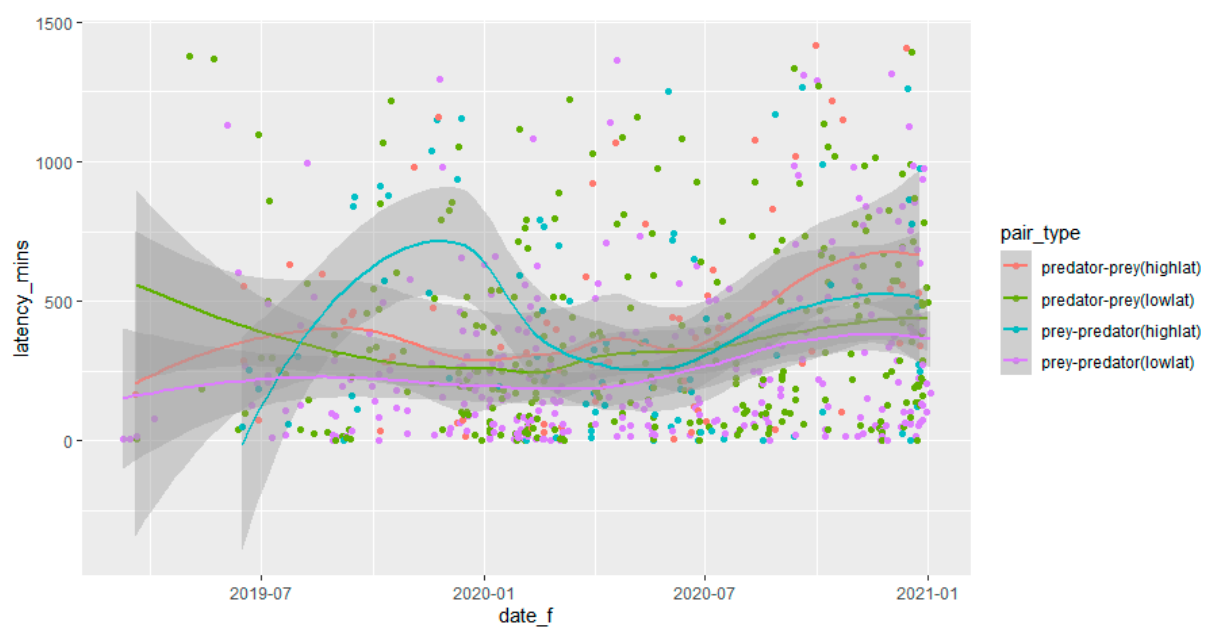


Figure S2. Variation in predator–prey and prey–predator latencies among crossing structures with high (highlat) and low (lowlat) overall prey–predator latencies throughout the monitoring period.