

Ecological Determinants of Chital (*Axis axis*) Reproductive Seasonality in Kanha Tiger Reserve

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Supplement



Figure S1: Different antler stages of male chital at different time of the year. In pic 1 Velvet male, pic 2 Hard antler male, and pic 3 shed antler male.



Figure S2: Visible udder of female chital during the lactation period

Table S1: Month and season-wise lactating female proportion

Season	Months	Mean Proportion Females Lactating monthly (SE)	Mean Proportion Females Lactating Seasonally (SE)
summer	March	0.74 ± 0.011	0.72 ± 0.002
	April	0.79 ± 0.008	
	May	0.67 ± 0.006	
	June	0.7 ± 0.007	
Monsoon	July	0.58 ± 0.006	0.49 ± 0.005
	August	0.44 ± 0.009	
	October	0.16 ± 0.005	
winter	November	0.07 ± 0.004	0.31 ± 0.003
	December	0.15 ± 0.002	
	January	0.45 ± 0.005	
	February	0.61 ± 0.006	

Table S2: Proportion of male chital present in the population with different antler stages.

Season	Month	Monthly mean proportion of males with velvet antlers in adult male population	Monthly mean proportion of hard antler males in adult male population	Monthly mean proportion of shed antler males in adult male population	Seasonal mean proportion of males with velvet antlers in adult male population	Seasonal mean proportion of hard antler males in adult male population	Seasonal mean proportion of shed antler males in adult male population
Summer	March	0.72 ± 0.006	0.25 ± 0.008	0.03 ± 0.003	0.43 ± 0.004	0.55 ± 0.004	0.01 ± 0.0002
	April	0.53 ± 0.015	0.47 ± 0.015	0.006 ± 0.001			
	May	0.18 ± 0.018	0.81 ± 0.018	0.01 ± 0.002			
Monsoon	July	0.008 ± 0.0006	0.97 ± 0.002	0.02 ± 0.001	0.05 ± 0.001	0.91 ± 0.001	0.04 ± 0.0004
	August	0.04 ± 0.002	0.91 ± 0.003	0.05 ± 0.001			
	October	0.26 ± 0.01	0.62 ± 0.012	0.12 ± 0.004			
Winter	November	0.32 ± 0.006	0.76 ± 0.02	0.07 ± 0.007	0.55 ± 0.002	0.31 ± 0.002	0.14 ± 0.0004
	December	0.5 ± 0.005	0.33 ± 0.005	0.17 ± 0.001			
	January	0.65 ± 0.003	0.19 ± 0.003	0.16 ± 0.002			
	February	0.74 ± 0.006	0.15 ± 0.004	0.11 ± 0.004			

Table S3: Month-wise average NDVI values of grasslands of Kanha during 2014-2023

Month	NDVI value
January	0.37±0.01
February	0.33±0.02
March	0.32±0.2
April	0.34±0.01
May	0.35±0.02
July	0.39±0.01
August	0.46±0.8
October	0.58±0.02
November	0.48±0.02
December	0.45±0.01

Table S4: Comparison of chital rutting and fawning time in different studies

Locations	Authors	rutting	fawning
Kanha	Schaller, 1967	April–July	January–April
Karnali–Bardia	Dinerstein, 1980	July	February
Chitwan	Mishra, 1982	April–May	March–April
Bandipur	Johnsingh, 1983	April–July	February–April
Chitwan	Mishra & Wemmer, 1987	April–May	March–April
Sariska	Sankar, 1994	April–June	December–February
Guindy	Raman, 1998	March–July	December–April
Mudumalai	Ramesh et al., 2013	May–mid-October	February–May
Hetauda Valley	Bhusal et al., 2020	May	January
Texas	Ables, 1977	May–August	January–April
Hawaii	Graff & Nichols, 1966	April–August	January–March
Queensland	Kelly et al., 2022	May–August	March
Kanha	Current Study	May–September	March–June