

LOST TIGERS PLUNDERED FORESTS:

A report tracing the decline of the tiger
across the state of Rajasthan (1900 to present)

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Front cover photograph courtesy: Sandesh Kadur

Photograph Details: Photograph of a mural at Garh Palace, Bundi, depicting a tiger hunt from the Shikarburj near Bundi town

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Table of Contents

FOREWORD	5
ACKNOWLEDGEMENTS	7
INTRODUCTION	11
STATE CHAPTERS	26
1. Ajmer.....	28
2. Alwar.....	33
3. Banswara.....	41
4. Bharatpur.....	45
5. Bundi.....	51
6. Dholpur.....	58
7. Dungarpur.....	62
8. Jaipur.....	68
9. Jhalawar.....	76
10. Karauli.....	80
11. Kishangarh.....	85
12. Kota.....	88
13. Marwar.....	98
14. Pratapgarh.....	103
15. Shahpura.....	107
16. Sirohi.....	110
17. Tonk.....	116
18. Udaipur (Mewar).....	121



Foreword

The study conducted by Priya Singh to retrace the distribution of tigers across the state of Rajasthan is an attempt to document the species in the recent historical context. In conversations on changes in natural landscapes in Rajasthan, there appeared a need to document presence of tigers in different districts of the state, by collecting both historical and anecdotal accounts and where possible, recording evidences. The period of study focuses the decades 1940s to 1970s; the study documents various habitats occupied by the tigers and their decline during this period including those of co-predators and prey in the regions covered.

This has been a tremendous effort by Priya Singh: in travelling to capitals of the erstwhile princely states, looking through old records and libraries, and interviewing numerous individuals who shared memories and knowledge. This collation of information itself bears testimony to the vast cultural and heritage related knowledge that resides in our country and that needs collation and documentation for generations to come. My thanks go to Priya Singh for her commitment and dedication to her work. Thanks also to the Forest Department of Rajasthan, and to Dr. G.V. Reddy in guiding Priya Singh to carry out this study. It was the guidance and thought of Dr. Reddy that formulated the outline of this study. Gratitude needs be expressed to those who shared their knowledge and records where available.

Apart from placing on historical record, the period under study highlights the decline of tigers in the western parts of our country where it was networked with both cultural tradition and custom and the larger heritage. The recent efforts for conservation of the species should also be seen in this positive light with due appreciation of the tremendous efforts for the conservation of the tiger and its habitat in Rajasthan.

I hope this report inspires other studies to be brought out both to document India's heritage and to provide continuing inspiration and need for conservation of India's unique wildlife.

Ravi Singh
Secretary General & CEO, WWF-India



Acknowledgements

Given my ancestral association with Rajasthan, this was an exciting assignment that I loved working on. However, I put myself against a massive challenge by agreeing to conduct a study of this magnitude in a period of three months. Executing any research on the tiger requires caution. It is a species that has been so extensively written about that few pieces of popular literature forget to mention it. This means having to deal with large volumes of data. To compound matters, my work involved deriving information from a multitude of sources, logistically the most difficult being, conducting interviews, most of them with people having aristocratic leanings. This meant going through several layers of communication before actually being able to speak with the person concerned.

However, hurdles aside, this was an enlightening experience through which I extensively expanded my knowledge of not just the tiger but also the history of Rajasthan. This assignment allowed me an opportunity to interact with scores of wildlife enthusiasts and nature lovers across the state of Rajasthan which was intellectually stimulating.

The genesis of the idea for this study can be traced back to an article written by Shri. R.G. Soni, ex-Chief Wildlife Warden, Rajasthan, on the same topic. In 2014, Dr. G.V. Reddy, Chief Wildlife Warden, Rajasthan shared his idea of conducting a state wide study on the same topic with Mr. Ravi Singh, Secretary General and CEO, WWF India, who enthusiastically agreed to fund the study. Mr. Ravi Singh hoped that the information obtained through this study would expand our knowledge of the tiger in its global westernmost distributional limit and aid present and future conservation interventions and management. I thank him and his team at WWF-India for all their help which includes funding this study, providing me access to an incredible collection of books and for intellectual assistance while I wrote this report.

I am highly indebted to Dr. Divyabhanusinh and Dr. Mahesh Rangarajan for guiding me as I embarked upon this near impossible journey. I started my interviews in Delhi, the first being with M. K Ranjitsinhji. I would like to thank him immensely for taking out several hours for this interview and for sharing his incredible stories on the tiger. The other important contributors to this study include Shri Salauddin Ahmed - who granted me uninterrupted access to his remarkable collection of books; and Mr. Shatrunjay Pratap Singh- an amazing friend, always enthusiastic to help.

The staff at the State Archives in Bikaner was very helpful and I would especially like to thank Shri Mahendra Singh Khadgawat who went out of his way to help me and ensure I lost out on no time at the State Archives due to bureaucratic issues.

I am extremely grateful to all interviewees who took time out to answer my many questions and share their vast knowledge about wildlife and tigers with me. While this list is extensive and I have cited all of them in the respective erstwhile State chapters, I would want to especially thank Maharaja Gaj Singh, Maharaj Sobhag Singh, Maharaja Krishna Chandra Pal Deo, Rajadhiraj Indrajit Singh, Maharaj Mahijit Singh and Rao Raja Raghuraj Singh.

I thank Maharawal Jagmal Singh for making my work easier by agreeing to meet me in Udaipur while on a work trip and Pradhyuman Singh for helping contact him. I greatly acknowledge the support I received from M. K Harshvardhan Singh and Thakur Raghunath Singh, both from families synonymous with the name of the 'tiger' in Rajasthan.

I met several officers from the Forest Department, some of who left me thinking deeper than I have before. These include Shri V.D. Sharma and Shri Vijai Salwan. Shatrujeet Singh and Jai Singh, thank you for sharing information with me and making me feel at home in Shahpura. Urva Sharma and her family deserve a special thank you for hosting me and helping me with everything in Kota. Shaz Syed, thank you for the interview with Captain Sahibzada Shamshir Khan, it was of great help. In Bikaner, a special thank you to my cousin Siddhi Kumari and to Kunwar Vishwajit Singh for all the help. Thank you to my cousin Kunwar Pradeep Singh, for his help and a very special thank you to my mother who handled all domestic challenges back home while I went about doing my work.

At WWF, I thank Sunny Shah for sharing with me interviews of Maharao Brijraj Singh, Shri Balendu Singh and coordinating with Maharaj Veer Bahadur Singh's family in Antarda. All this information was of great value to this study. I also thank Abhishek Bhatnagar for providing assistance with logistics and sundry issues in Jaipur and Bharatpur. Dr. Dipankar Ghose was very supportive throughout the study and his assistance and suggestions were immensely appreciated.

All maps used in the report were made by Sraboni Mazumdar under the supervision of Dr. G. Areendran at the WWF GIS Cell. I am grateful to both, Sraboni and Areendran for their help. I profusely thank Dr. Johnsingh and Mr. Valmik Thapar for their valuable inputs, which were very helpful. I also thank Sandesh Kadur for proof-reading this document and for his suggestions.

As I mentioned before, this study has been possible with help from innumerable people, almost impossible to list here. However, in no way has their contribution been any less. I once again thank all of them for sharing information with me. Two people particularly stand out with respect to this assignment, Thakur Devi Singh Malasar and Col. Shyam Singh. Devi Singhji was one of the many who opened his house to me for this study and despite his ill health spent almost an entire day talking to me about tigers and other animals. Not just that, he personally accompanied me to the Bikaner Palace in Mount Abu so that he could describe every photo on the wall to me. He showed where a certain tiger was shot and where the bear came out in the

evenings. Even months post my visit; he continued sharing wildlife related information with me. Unfortunately, while I wrote the acknowledgements for this study in February 2016, one morning, I was informed that he passed away, very disappointing news for me. Similarly, Col. Shyam Singhji handed me a heap of books authored by him, the moment I met him. These books, a treasure trove for me, made writing the Bharatpur chapter so much easier. As I made the final edits to this document, I was informed of his demise. Both these losses make for rude reminders of how crucial it is to document information from such well experienced members of the wildlife community.

I hope this report, a documentation of records and experiences from those interacting with wildlife for years will find utility in aiding management and promoting conservation of the tiger and its prey species. I hope it will influence policy makers and wildlife enthusiasts realise how fragile the domain of the tiger is and how little time it takes for entire populations of a species to perish.

Priya Singh
Author



Introduction

Mammalian carnivores are particularly sensitive to human induced environmental alterations with 26% of them threatened with extinction.⁵ Increasing human populations,¹⁶ intrinsic biological traits¹, climate change⁸ and hunting,^{3, 12} have been identified as major contributors to global decline of large carnivores. The tiger (*Panthera tigris*) is one such species, listed as endangered in the IUCN Red List of threatened animals.^{7,8}

Tigers have already been extirpated from much of their original home range and occupy only 7% of their historical distribution today.^{11, 15} Furthermore, within the last century, three of the nine sub-species of tiger, viz., Bali (*P.t.balica*), Caspian (*P.t.virgata*) and Javan (*P.t.sondaica*) have been declared extinct while the South China tiger (*P.t.amoyensis*) is critically endangered with the only confirmed individuals belonging to the sub-species living in captivity.¹⁸

Around 60% of the extant tiger population is found in the Indian sub-continent covering 8-25% of their original global habitat.¹¹ This population has seen a rapid decline since the Indian independence from a guesstimate of 40000⁴ to around 2200.⁷ Today 75% of these individuals are restricted to 49 highly secured and closely monitored Tiger Reserves while the remaining have been found using territorial forest divisions. However, events such as the local extirpation of the tiger from Sariska Tiger Reserve in 2005 are sound reminders of this species being on the brink of extinction even within these secured zones.

Amongst the many threats faced by the tiger, the most detrimental to its survival is human induced mortality.² Assaults on tiger can be traced back to over 1500 years ago during the Roman Empire when tigers were extirpated from the entire Middle East region.⁹ Within the Indian sub-continent, molecular studies indicate an unnatural decline in tiger populations dating back to around 200 years,¹¹ a period that coincides with early establishment of the British Rule in India.

Historical accounts derived from official and hunting records from the pre-colonial and the colonial era give a sense of the vast distribution of the tiger in the Indian sub-continent. Tigers occupied a vast diversity of landscapes across the country and were hunted for reasons that changed with time. In late 19th century, bounties were given for hunting “dangerous” animals such as the tiger. Between 1875 and 1925, an estimated 80000 tigers were hunted for bounties.¹³ By early 1900s, status of the tiger changed from a “dangerous beast” to the “royal game”. Hunting of the species was no longer open to everyone. It was safeguarded across princely India to be hunted only by high ranking officials and members of the ruling clans. Shooting a tiger became a symbol of power and courage. It was an extraordinary privilege to get an

opportunity to hunt a tiger. Princely States developed their own tiger hunting strategies and invited special guests to participate in the sport, mostly with the aim to gain favours in return from the guests.¹³ Generally tiger hunting was conducted with assistance from beaters and elephants. Tiger hunters would wait either in *machaans* mounted up on trees or in specially constructed shooting boxes. With the arrival of the motorised vehicle, pursuing tigers became relatively easier. In rare cases, adventurous hunters pursued their quarry on foot.

Some of the individuals being pursued were man-eaters while others were cattle lifters. However, most often they were prized potential trophies. Generally hunting etiquette demanded not hunting females and cubs, but when tiger hunting became competitive, sex, age and other attributes of the animal no longer mattered.

Post Indian independence, hunting tigers became free for all. Anyone in possession of a gun and with the ability to afford the minimal tiger hunting permit fee could indulge in the activity. Organised *shikar* companies widely advertised the sport of hunting tigers in India and catered to wealthy trophy hunters from across the world. Within a period of four years, between 1965 and 1969, over 4000 tiger and leopard skins were exported out of India.⁶ By 1960s, projections of the tiger population in the country had declined to around 4000 individuals,⁴ which in itself may have been an overestimate.

By the latter half of the 1960s, it was clear that the tiger population was rapidly approaching extinction. By 1969, with population estimates of the tiger declining to 2500 or less,¹⁷ the Indian government was compelled to impose a ban on export of tiger skins and a hiatus on tiger hunting, which was eventually to become permanent.

Many contemporary studies attempt at capturing changes in tiger population and occupancy across different temporal and/or spatial scales. This allows wildlife managers to empirically evaluate the effects of various management and the conservation interventions aimed at the species. However, most such studies are conducted over short temporal periods from a historical perspective. This is primarily due to lack of long-term historical data available on the tiger or other species. Consolidating such data could provide important information needed to make comparisons in distributions and occupancy of the tiger for a region across large temporal periods. Such information would be vital for wildlife managers in understanding the nature and to some extent reasons for the decline of the tiger in the area of interest.

Goal of the study:

The contemporary state of Rajasthan has witnessed a long history of struggle and war with invaders from different clans ranging from the Mughals, Marathas to the British. After the third Maratha War (1817-18), most of the Rajput territory came under the unified, direct control of the British. Post this period, the borders between different Rajput kingdoms were sealed, with the entire region being consolidated into one Rajputana Province under

British hegemony. This form of administration continued until the eventual independence of India in 1947 and for few years succeeding it, until the Princely States merged with the Indian Republic.

Following were the 19 Princely States, divided into ten administrative groups:

- a. Alwar Agency
- b. Bikaner Agency
- c. Eastern Rajputana States Agency: included Bharatpur, Dholpur and Karauli
- d. Hadoti-Tonk Agency: Tonk, Bundi and Shahpura
- e. Jaipur Residency: Jaipur and Kishangarh
- f. Kotah-Jhalawar Agency: Kotah and Jhalawar
- g. Mewar Residency
- h. Western Rajputana States Agency: Banswara, Pratapgarh and Dungarpur
- i. Western Rajputana States Residency: Jodhpur, Jaisalmer and Sirohi
- j. Under direct British administration was Ajmer-Merwara

Being a martial clan, one commonality the Rajputs shared was their interest in hunting wild animals. An icon of power and strength, the tiger, hence became a popular target for hunting with its hunting rights restricted to the rulers and their privileged guests. Hence, the period from the early 1900s until the conceptualization and implementation of the Wildlife (Protection) Act in 1972, saw large scale hunting of the tiger and other wildlife across much of its range. Some information pertaining to this hunting was preserved in the form of *shikarkhana* records, State records or gazetteers, photographs and trophies, while some was passed on orally between members of a family.

Collecting this information pertaining to the historical distribution and decline of the tiger into one concise document gives a sense of the range of the tiger in Rajasthan and enhances our understanding of the species. It also, hopefully will help initiate a movement towards restoration of previously forested landscapes of the region. Most importantly, this study about the most charismatic carnivore in India helps capture information that would otherwise soon be lost forever, and paves the way for similar scholastic endeavours from other regions of the country.

METHODS

This study was conducted in the state of Rajasthan in north-western India between September and November 2014. Biogeographically, the state is categorised into Desert: Thar and Semi-arid: Gujarat Rajputana.¹⁴ It has four physiographic regions, viz., the western desert, Aravalli Hills, eastern plains and the south-eastern plateau (Hadoti Plateau).¹⁰

For the purpose of this study, I travelled to several cities which include: Jaipur, Bharatpur, Sawai Madhopur, Udaipur, Jodhpur, Bikaner, Kota, Bundi,

Dungarpur, Shahpura, Kishangarh, Ajmer and Mount Abu. My aim was to obtain information pertaining to the historical distribution of the tiger in the area based on interviews, literature searches and other sources of information.

In case of interviews:

- a. I identified potential interviewees based on their interest in wildlife and natural history, role of their families in hunting tigers or other wildlife and their association with members of royal households or other keen shikaris. Officials and field staff from the Forest Department who had spent considerable time in areas with historical presence of tiger were also interviewed.
- b. Permission to interview was sought from each interviewee before interviewing them and a mandate of this study shared with them.
- c. Permission was also sought to audio-record the interview. However, if interviewees opted not to have their interviews audio-recorded, detailed notes were taken on their responses to every question asked.
- d. Interviews were based on a semi-structured questionnaire in order to conserve time and avoid conversations deviating from the topic.
- e. The questionnaire contained questions pertaining to hunting of tigers, presence of co-predators in the area, prey species available and the form of management practiced.
- f. A total of 61 people were interviewed during this period.

While I conducted interviews in the above mentioned cities, I also travelled to locations in surrounding remote areas to obtain first hand information from reliable sources on historical presence of tigers. During my travels to the mentioned cities, I visited public libraries, museums and interacted with officials in the Forest Department offices and local field staff. Visits were also made to several forts and palaces that contained murals or paintings on hunting.

A substantial part of this study was spent reviewing literature at the Rajasthan State Archives in Bikaner. In the limited period, I was able to examine forest related documents for Ajmer-Merwara, Sirohi and Bharatpur States only. I accessed archived documents for the erstwhile States of Kota and Bundi at the district office of the State Archives in Kota.

Apart from collection of the above information, post the field study period, I spent several months reading through a vast collection of books on *shikar*, many of which are now freely available on the internet and others that I had borrowed from various sources.

Interviews recorded were transcribed and analysed, along with detailed notes from literature searches, to sieve out relevant information. Since my target period for this study was between 1900 and 1972, with most reliable sources of information available from the pre-independence era, I chose to present the obtained information in the form of chapters' representative of the Princely States.

Each chapter contains a brief outline on the location of the region, predominant habitat, vegetation types, physical features, brief summary of wildlife found in the area in pre-independent India, followed by content on tigers and their distribution. A small section has also been included to reflect views of the interviewees on temporal and spatial changes in the composition of biodiversity of the area they were familiar with.

Sources of information:

For the purpose of this study, we collected information from:

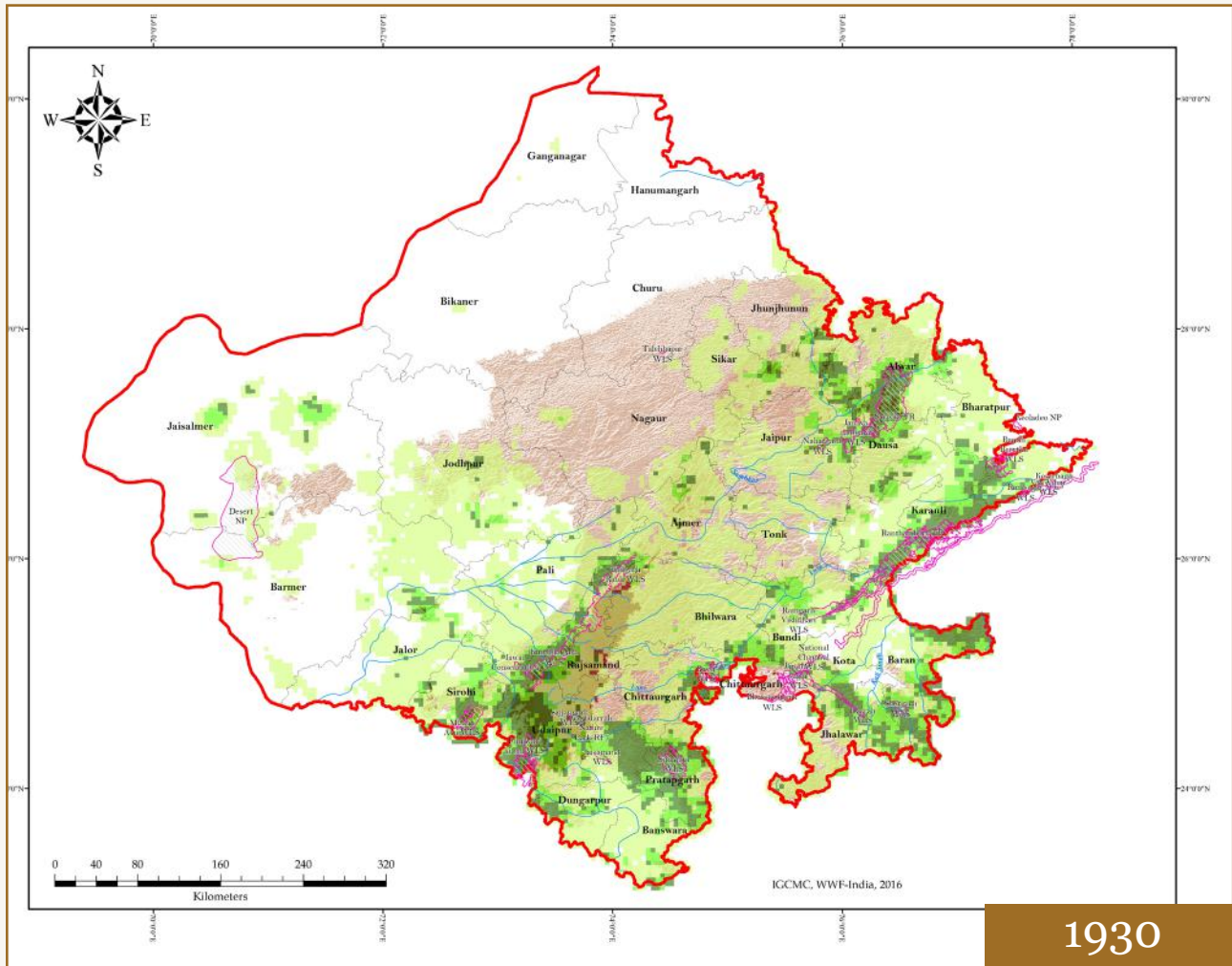
- a. The State Archives in Bikaner
- b. District Archive Office in Kota
- c. Management and Working Plans obtained from the Forest Department, Rajasthan
- d. Hunting diaries from collectors and private libraries
- e. Books on wildlife and shooting
- f. Interviews with members of erstwhile royal households, associated members- e.g. guardians/managers and noted historians
- g. Interactions with Michael Van Ingen of the Van Ingen & Van Ingen family in Mysore
- h. Paintings and murals on hunting
- i. Information obtained from custom made artefacts associated with hunting
- j. Photographs in private and public domains
- k. Animal trophies in private or public domains
- l. Visits to local or regional museums
- m. Field visits to locations of interest

Methodology for generating maps:

To generate maps of forest cover for the state, topographical maps prepared by the Army Map Service, U.S. Army, Washington (1:250000 scale), surveyed during 1920-1940 (www.lib.utexas.edu/maps/ams/india) were acquired. The remote sensing data pertains to Landsat MSS (1972-1977), TM (1980-1986, 1992-1996), and ETM+ (2000-2005, 2010-2015) provided by Global Land Cover Facility Programme and was downloaded from the website (glcfapp.umiaccs.umd.edu:8080/esdi).

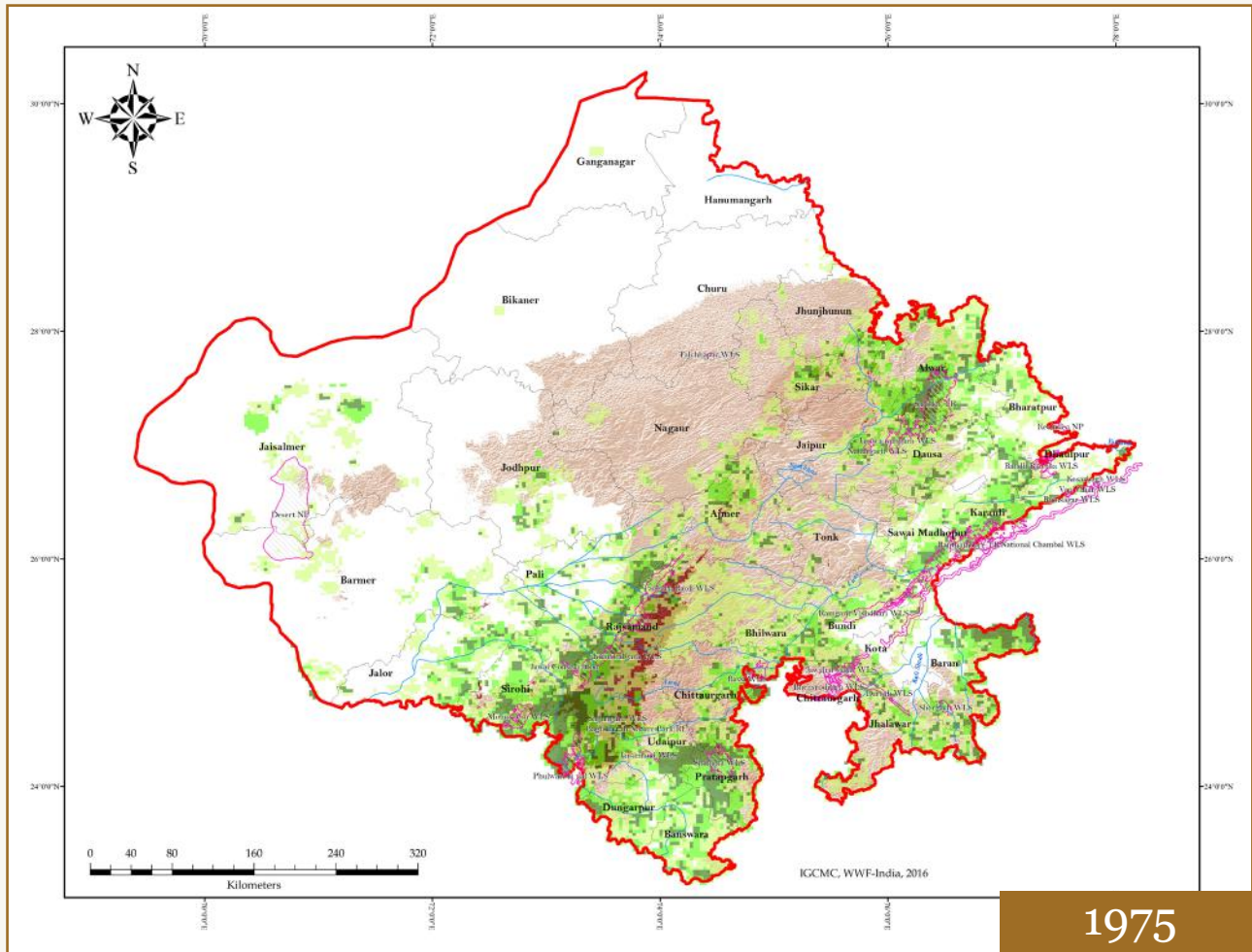
The satellite data acquired was preprocessed, followed by image extraction, noise removal and geometric correction. The study area was extracted from multiple satellite data scenes by sub-setting. For interpretation of topographical maps, on-screen visual interpretation technique was used. In remote sensing data analysis, spectral and temporal characterization for land cover mapping was done by multi-season data which masked the vegetation cover for further visual interpretation. The hybrid method of digital and visual interpretation of the satellite imagery for forest change supports identifying areas of deforestation and afforestation/reforestation and is expected to have reduced the inconsistencies.

RAJASTHAN FOREST COVER MAPS



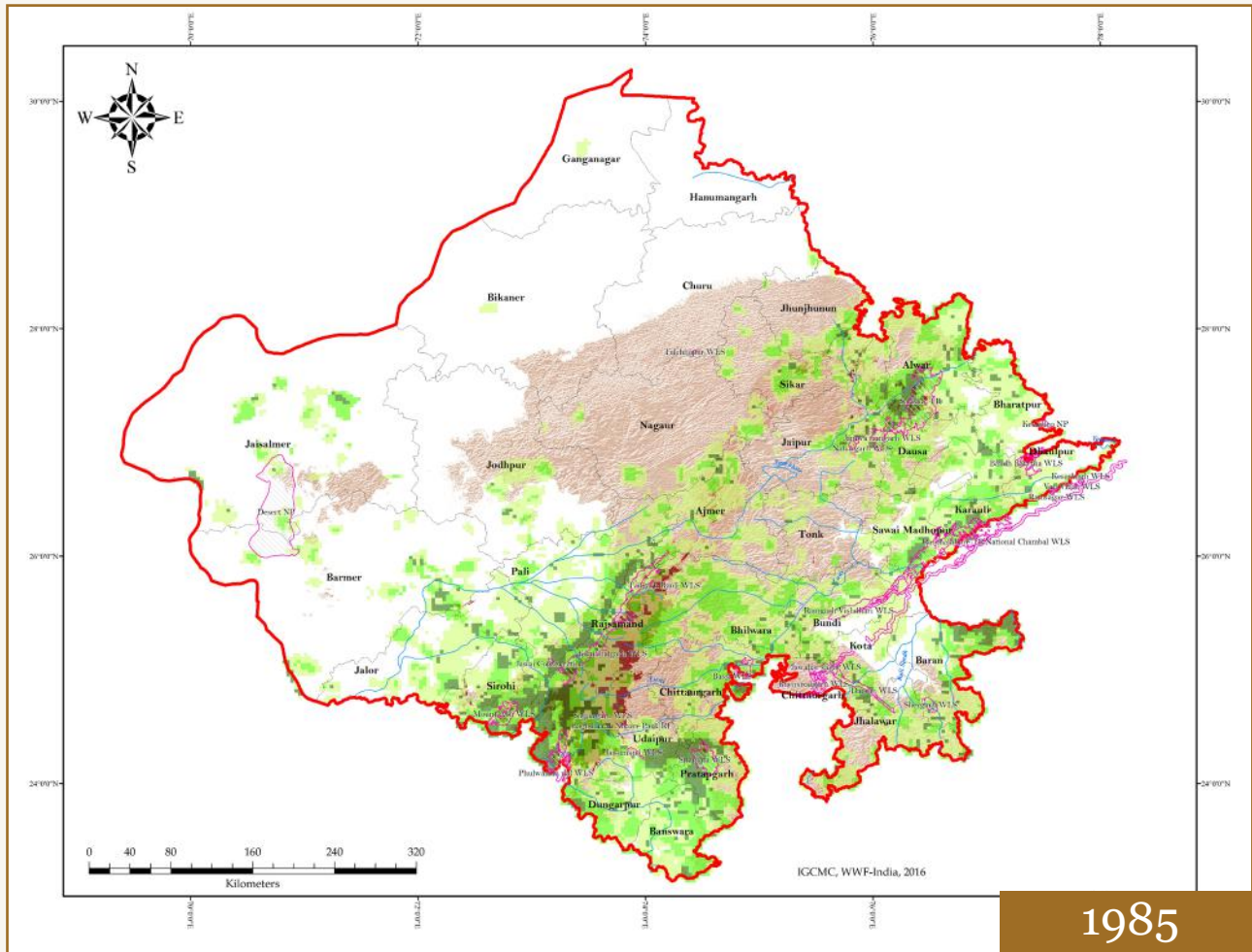
Scrub
 Open Forest
 Dense Forest

The varying intensity of brown in the maps indicates elevation with the darkest representing the highest and lightest lowest elevations.



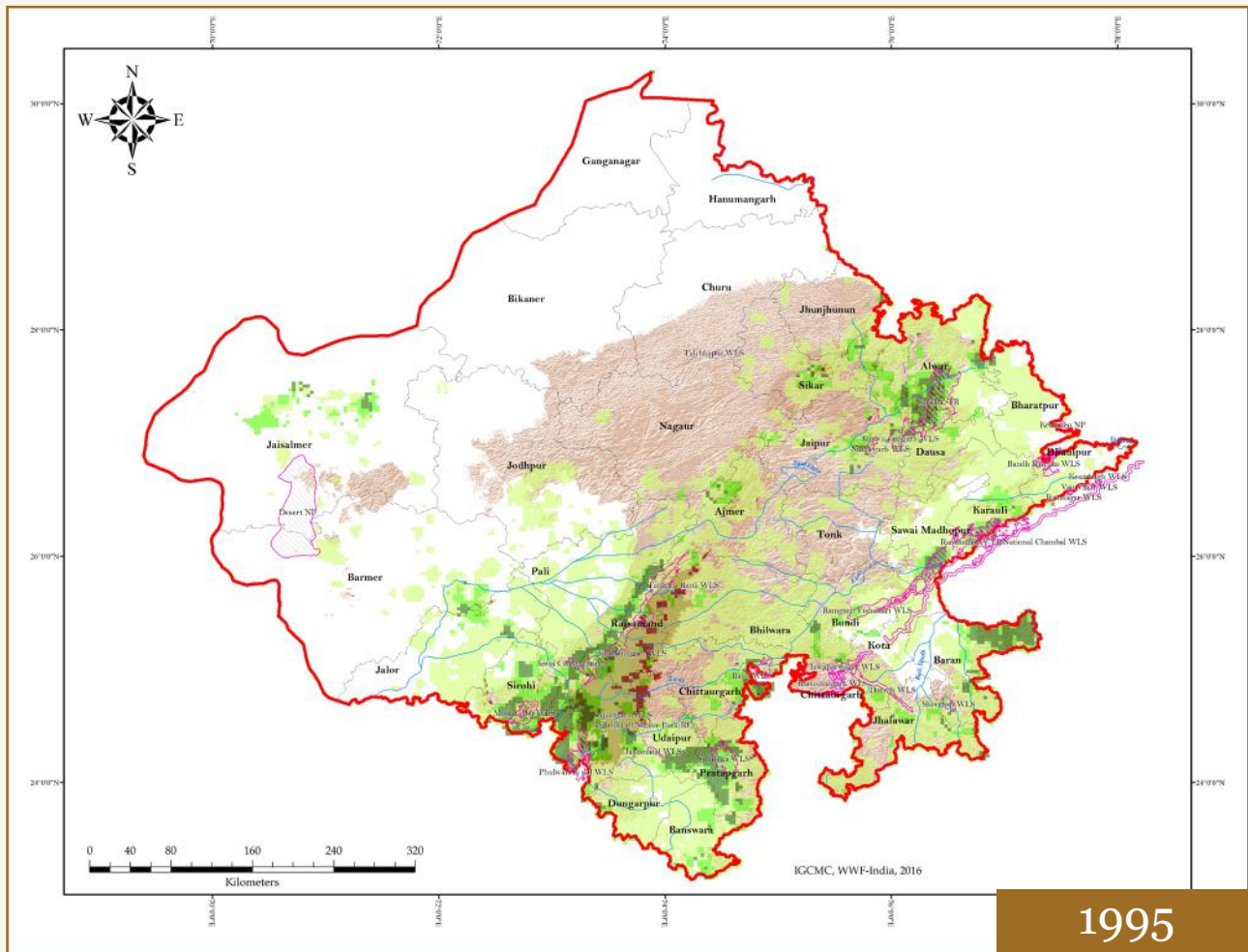
Scrub
 Open Forest
 Dense Forest

The varying intensity of brown in the maps indicates elevation with the darkest representing the highest and lightest lowest elevations.



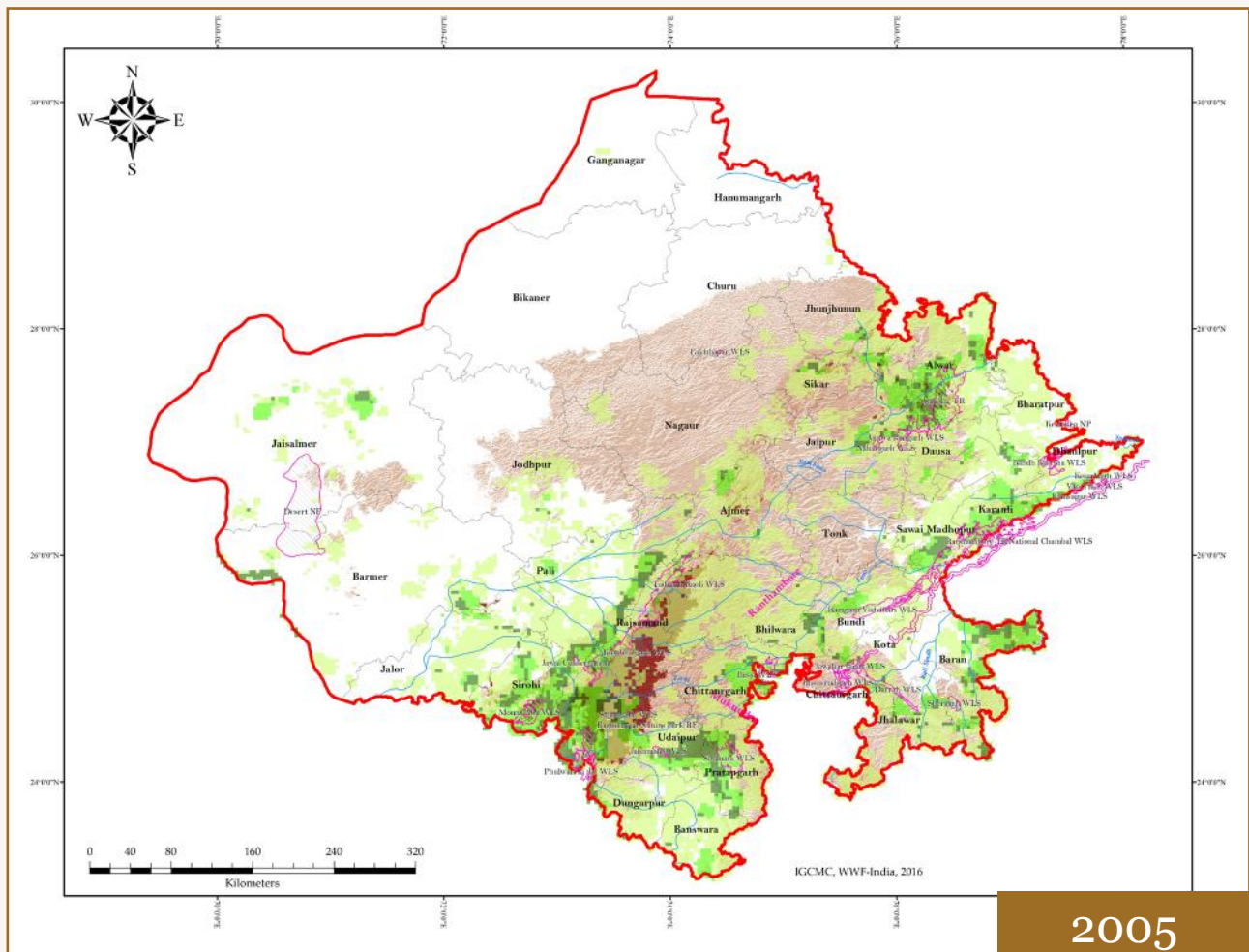
Scrub
 Open Forest
 Dense Forest

The varying intensity of brown in the maps indicates elevation with the darkest representing the highest and lightest lowest elevations.



Scrub
 Open Forest
 Dense Forest

The varying intensity of brown in the maps indicates elevation with the darkest representing the highest and lightest lowest elevations.



Scrub
 Open Forest
 Dense Forest

The varying intensity of brown in the maps indicates elevation with the darkest representing the highest and lightest lowest elevations.

The annual rate of forest cover change was calculated by comparing the area under forest cover in the same region at two different times. The annual rate of change which was derived from the compound interest formula was calculated following Puyravaud (2003).

$$r = \frac{[\ln(A_{t1}) - \ln(A_{t0})] \times 100}{t1 - t0}$$

Where *r* is the annual rate of change (percentage per year); and *a1* and *a0* are the forest cover estimates at time *t1* and *t0* respectively.

CONCLUSION

This study presents detailed information on distribution of tigers across Rajasthan from early 1900s to the contemporary era. In some cases where I came across information on distributions of tigers from late 1800s, I chose to include it in this study to ensure it remains documented. With limited time available for this study, I could not conduct extensive research on the erstwhile States of Alwar and Pratapgarh, both of high relevance with respect to distribution of the tiger. However, I have included chapters on both States with limited information that I could gather. Some important findings from this study include:

Distribution of tigers across diverse habitats:

Tigers were distributed across a diversity of landscapes in the present state of Rajasthan. Countering the common belief that tiger distribution in Rajasthan followed the Aravallis; findings from this study indicate that tigers occupied a variety of habitat types. They were found along the grass laden banks of Rivers Chambal and Banas while also seeking shelter in the riverine vegetation along much smaller rivers such as the Brahmani near Bhainsrorgarh. In some cases, they occupied riverine islands. In the semi-arid regions of Shahpura, they would seek shelter in abandoned mine shafts during the afternoon heat.

Tiger rich forests in Rajasthan:

Until 1940s, it was common to encounter more than one tiger in a single day in the forests of Bundi, Kota, Jhalawar, Jaipur and Udaipur.

Rising protests by locals:

By mid 1940s, there were large-scale protests across vast parts of Rajasthan against crop damage by herbivores, which were protected by ruling elites for the purpose of sport hunting. Simultaneously, tolerance towards man-killing or cattle-lifting predators declined rapidly. The newly formed '*Praja mandals*' started holding public meetings and demanded destruction of wild animals that were a threat to their lives or livelihoods.

Too many tiger hunters:

Between 1955-65 tiger hunting escalated, decimating almost the entire tiger population of areas such as Todgarh-Raoli, Bund Baretha, Van Vihar, Majhela in Kishangarh, forests of Dungarpur, Shahpura and Marwar. With fading powers of the Raj, every man with a gun wanted to hunt the royal quarry. While this still restricted hunting tigers to members of ruling families or those in high administrative positions, it meant access for too many tiger hunters.

Low priority to forests:

By the time a ban was imposed on hunting tigers, there were few places in Rajasthan left with tigers. This was a period that saw implementation of large-scale developmental initiatives in India. In order to increase food supply, the government was building dams to provide water for agriculture. Electricity generation for industrial use and to meet the requirements of the rapidly expanding urban centres was another reason for dam construction. This meant submergence of vast forested areas and relocation of villagers from remote areas. Some examples of these dams include Rana Pratap Sagar, Jawahar Sagar and Mahi Bajaj Sagar. Industrialisation and rapid urbanisation also exerted a demand for stone for construction and timber. All of this meant higher pressure on forests. By 1972, the only forests in Rajasthan that supported viable populations of tigers and their prey included forests of Sariska, Sawai Madhopur and Bundi.

Not just the tiger:

An important finding from this study was that while the tiger and the leopard populations in the state were affected by excessive, unregulated hunting; species such as the blackbuck which once was very common across the state and found in herds of thousands disappeared from vast areas. In fact, based on preliminary information, it appears that grassland species such as the blackbuck and the wolf have suffered a much larger decline spatially and demographically than that for any other species in the state of Rajasthan. While hunting has been attributed for its disappearance from large areas, change in land-use has had an equally important role to play.

IMPORTANT NOTES

The aim of this study was to reconstruct distribution of the tiger and other sympatric wildlife in the state of Rajasthan, over a period of a century, starting end of the 19th century. One reliable way of assembling this information is by visiting literature related to hunting and associated stories, both until now well preserved in certain homes of Rajasthan. This method was one of the data collection strategies used for the purpose of this study.

However, it is essential to keep in mind that definitions of hunting and wildlife preservation have undergone many legal and cultural changes from the period visited here (late 19th century to present).

Hence, it is requested of all readers to bear in mind the period involved and the then prevalent culture of hunting. I request all readers of this document not to superimpose present over the past and draw unrealistic inferences of people, culture and the era mentioned here.

I also want to mention that I have taken immense care to ensure that content of this report is appropriately and accurately referenced. However, in case any reader has conflicting views on the content presented here, please contact me and I will be willing to look into the matter.

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STATE CHAPTERS

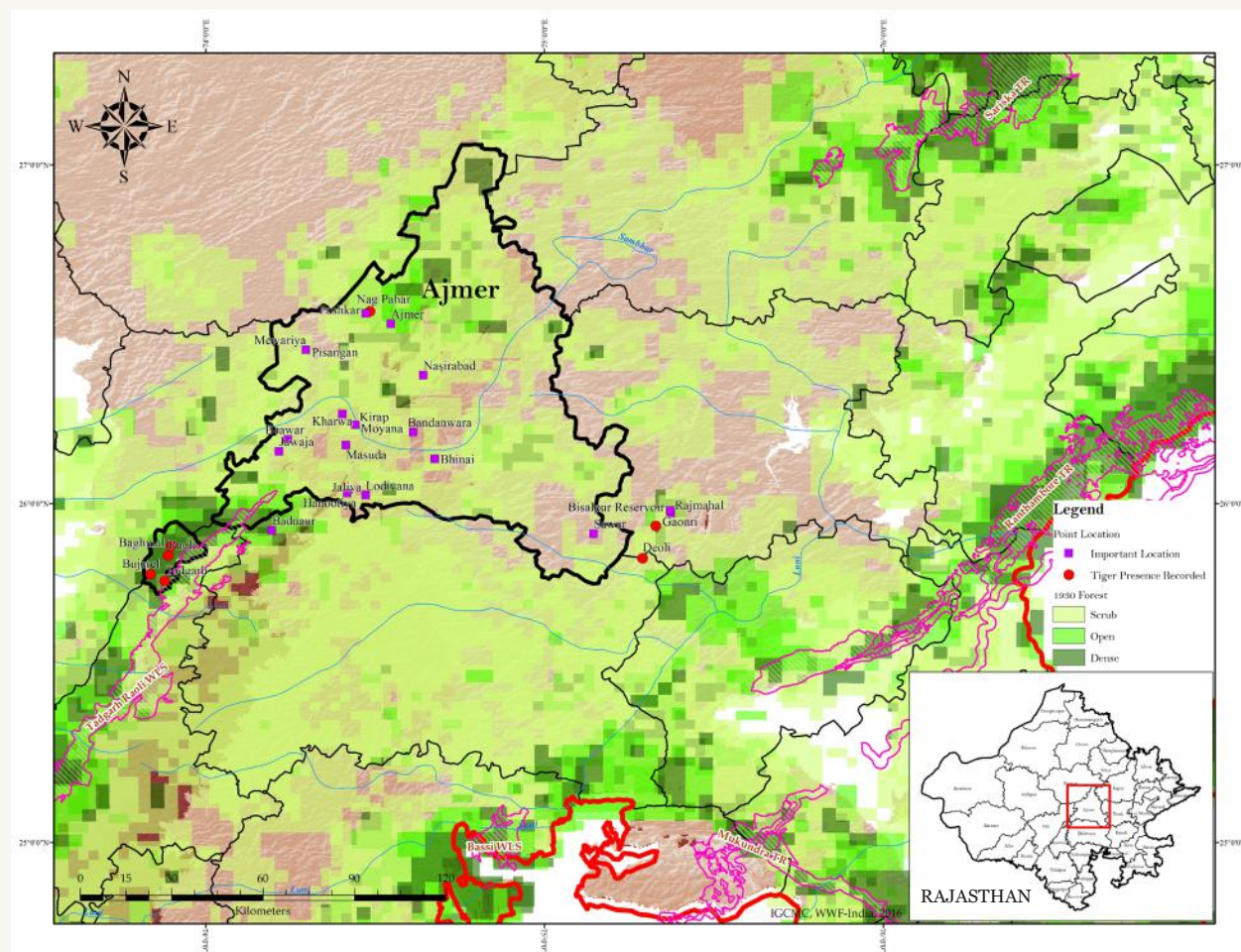
**A report tracing the decline of the tiger
across the state of Rajasthan (1900 to present)**

1. Ajmer

Located in central Rajasthan is the isolated erstwhile British Province of the region called Ajmer-Merwara. The Aravalli Range traverses this province attaining the highest elevation at Todgarh where the peak of Goramji rises to 937 metres.³ The city of Ajmer itself is located on a plateau which forms the highest point in the plains of India.³ The Aravalli Hills in this region form an important water divide. Rain water from the hills of Naseerabad located to the east of Ajmer, flows into the Chambal and thereon to the Yamuna and Bay of Bengal while the western slopes drain into River Luni, eventually emptying into the Arabian Sea.³

Forests, Habitat and Protection:

Most areas around Ajmer and in the erstwhile *Istimrari* estates had scrub type vegetation and grasslands. Forest of this region was restricted to the Aravallis which covered an area of 145 kilometres in length and 16 kilometres in width.³ This area covered most of the 753 sq. km. of forest found in this province.¹ Ajmer has a well documented long history of forest management. While the Marathas are held responsible for the disappearance of forest in Ajmer, the Merwara region which was described as ‘impenetrable’ in 1819,³ had reached almost the same stage as Ajmer, within 50 years of British governance. The main



Map 1. A 1930 forest cover map of Ajmer District depicting locations with confirmed historical presence of tigers.

reason for the drastic decline in tree cover was the heavy demand for firewood from Beawar and the British cantonment at Naseerabad.³ In 1871, posts of an Assistant Conservator and Sub-Conservator were constituted for Ajmer to reforest areas around the city. The primary motivation for this decision was to reduce the speed of water flowing down hills around Ajmer during monsoon, help reduce temperature in the area by increasing tree cover and most importantly to induce rain. By 1874, Ajmer Forest Regulation Act was enacted, probably the first of its kind in the entire state. Under this regulation, land was to be taken over for afforestation and settlement surveys were conducted in areas around Ajmer.²¹

A few years later, in the early 1880s, it was made mandatory for European soldiers and others to obtain a shooting pass before entering a government reserve with a gun.^{6,7} This was followed by the application of the Wild Birds Protection Act of 1887²⁰ to the municipalities of Ajmer, Beawar and Naseerabad.⁹ Under this Act, game birds and animals such as partridge, bustard, sandgrouse, waterfowl, hare, blackbuck and chinkara were assigned seasons closed for hunting.²⁰

Wildlife:

With little cover for animals, species such as leopards, hyenas and bears were restricted to the hills. Species such as sambar had become rare by 1892, when the Assistant Conservator of Forests showed concern and gave orders not to grant permissions to hunt them.⁶ By early 1900s, sambar were found only in areas such as Nagpahar, Todgarh and Rajmahal in Deoli. Around 1895, Rao Bahadur Singh of Masuda introduced cheetal on his estate. When some European soldiers fired at them at Lodiana and Jalia, he requested for exclusive hunting rights in Masuda, Hurrajpura, Moyna, Kirap, Ramgarh, Jalia, Hanwantia and Lodiana.¹⁹

Wild Pigs:

The most widespread and ardently preserved species in the area was wild pig. Many *Istimrari* estates such as Pisangan, Bandanwara, Kharwa, Badnore and Bhinai had reserves for the species and practiced pig-sticking which was an important sport in the region. In fact, several Tent Clubs were formed by Europeans in the area and often sent requests to the Ajmer-Merwara Commissioner for permissions to pig-stick.⁸ Around the same time, populations of pig increased so alarmingly that complaint of pigs from preserves ruining crop became common.^{7,8} In January 1897, Thakur of Meywaria complained against the chief of Pisangan for not taking measures to prevent pigs from his estate escaping into neighbouring agricultural areas.⁸ Similar complaints of pigs destroying crop came from Jalia, Rajgarh and later Sawar.^{4,8} Forest guards and horsemen were deployed by the *Istimraridars* to protect pigs on their estates.⁴ The urge to increase wild pig populations was so intense that they were secretly enticed from one estate to other using sly methods such as luring them with trails of maize.⁴ In estates such as Sawar, one could kill a deer or hare but not a pig.⁴ In contemporary times, the subject of wild pigs on *Itstimarari* estates has attained much academic importance and they have been identified as 'emblems of royal power and nature's endurance' and considered 'metonymous with brute political power and eco-exploitation.'⁴

Distribution of the Tiger:

Tiger was rare in the over-exploited forests of Ajmer-Merwara. By the last decade of the 1800s, a rare tiger would be reported from the Merwara forests.³ Rewards were still given for destruction of carnivores which included tiger (Rs. 7), leopard (Rs. 5) and others such as bear, hyena and wolf, (Rs. 3).³ In July 1912, when the Commissioner of Ajmer-Merwara agreed to give permanent shooting passes to the Merwara Infantry, he restricted it to not more than 12 leopards annually and a mandatory special permit for sambar, bear and tiger.^{6,8} His reasoning for it was that the tiger had already been wiped off Merwara and he did not want to exterminate the leopard as well.⁶

The only parts of Ajmer-Merwara where the tiger survived into independent India were Todgarh, areas around Deoli and a rare one in the hills of Nagpahar.

In May 1900, Mr. W.C. Morley shot a tiger in Dantalian near Bujarel, in Todgarh area.⁸ Next day he was on his way to the Modia forest to shoot two tigers supposedly dwelling there. In the same area, Keshav Sen of Kharwa shot several tigers between Jan 1946 and 1955, most of them in the Todgarh and Baghmal Blocks.^{5, 10, 11, 12, 13, 17}

Date	Name of person	Details of tiger shot or missed
22 May , 1949	Keshav Sen Kharwa	Tigeress-1 near Raoli
17 Jan-3 Feb, 1949	Keshav Sen Kharwa	Tiger-1 in Government Forest
2 July, 1953	Keshav Sen Kharwa	Tigers-2
22 Dec, 1953-12 Jan, 1954	Rao Ganpati Singh Kharwa	Missed a tiger
11 Sep, 1954	Keshav Sen Kharwa	Tiger-1 in Todgarh Block
2 Jan, 1955	Keshav Sen Kharwa	Tiger-1 in Satukhera Block

Apart from the tigers in Todgarh, one man-eater was shot in 1956-57, in Gaonwari Hills of Deoli Range² and another individual shot in Nagpahar area in early 1950s (information obtained from Mr. V.P. Singh).

By the end of the 1950s, tigers went extinct from this region. Although, forests of Ajmer-Merwara did face severe assault, the final blow to the tiger in this region was undoubtedly excessive hunting.

Decline of Wildlife:

Indian independence had severe repercussions for wildlife in this region. Crop raiding by wildlife suddenly became an important topic that needed to be dealt with utmost urgency. Areas such as Nagpahar that were closed to hunting had to be opened in 1949 due to complaints of crop raiding by sambar from local farmers.^{14, 15} This was despite the block being closed to shooting and despite a ban on shooting sambar. Religious and safety concerns were disregarded in favour of opening up areas to shooting. In places such as Pachkund Garden where shooting was prohibited due to its proximity to Pushkar - a religious place, ways were found to justify necessitating it, such as due to fear of attack by carnivores during the process of driving out ungulates from the forest block. In which case, issuing a general shooting order sounded reasonable.¹⁴

Blanket permissions were given to drive out animals from protected reserves and to shoot a limited number of them, the latter provision often being misused with no checks in place. In Sawar, in 1951, the entire village went killing pigs, succeeding with a bag of around 90 in one day.⁴ The tide turned so intensely in favour of hunting, that even when villagers from Jawaja, appealed for a ban on hunting at the village tank, citing safety of village animals and people as a reason along with the presence of a Mahadev Temple on the tank bund, the request was turned down.¹⁶ The Deputy Commissioner's office wrote back saying, "practice of shooting is old at Jawaja Tank and shooting and fishing was never prohibited. Practice may not be interfered with!"¹⁶

In January 1951, A. S. Dhawan wrote to the DFO, Ajmer that, "the Chief Commissioner, Ajmer, has observed that crop protection must come FIRST and that it must override all other considerations and sentiments in respect to the destruction of wildlife. In order to achieve this object you should review all the notifications that impose restriction on shooting of birds and animals which cause damage to crops and send your proposals for their removal or relaxation as the case may be by the end of January 1951 positively".

It was only in 1950 that the first thought occurred regarding restricting shooting carnivores as a precaution.¹⁸ This was followed by a letter from the DFO Ajmer to the Chief Commissioner suggesting imposing restrictions on shooting tigresses with cubs.¹⁹ The irony of the situation being, that there were few tigers, let alone 'tigresses with cubs' left in any part of Ajmer by this time. While this order was being contemplated over, shooting fee for tiger was raised to Rs. 50. Most *jagirdars* and *istimraridars*, usually the ones shooting tigers, were however excused from paying this amount.

In this period of severe assault on wildlife and forests, the forest settlement operations started in 1954.² However, these were marred by constantly changing policies and lack of clarity in instructions and future direction. The result was, even as late as 1960s, very few forest blocks were settled and notified and even those that got demarcated were not transferred to the Forest Department in revenue records.²

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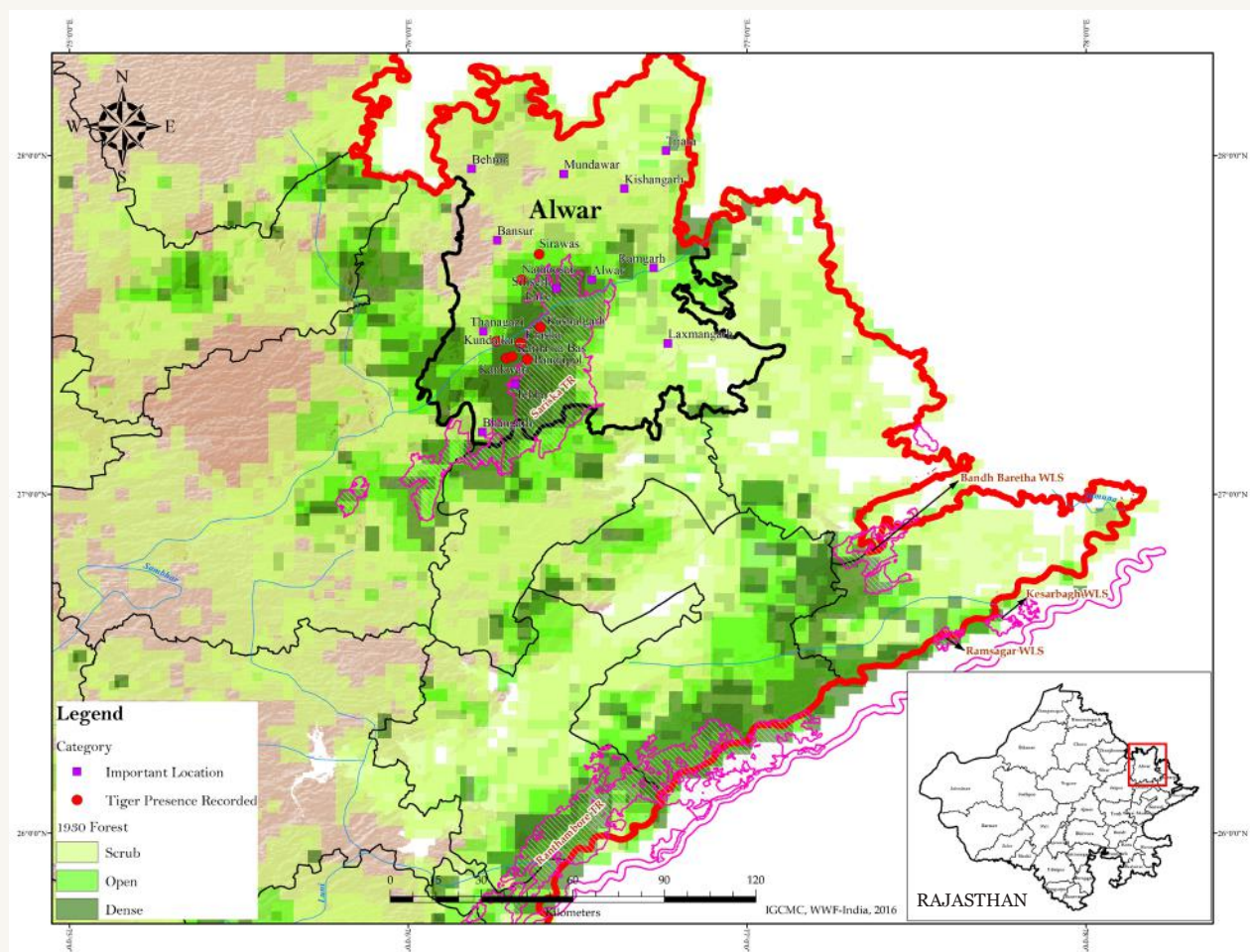
2. Alwar

The erstwhile State of Alwar was located in the northern most part of Rajasthan. To the north it was bordered by Gurgaon, Nabha and Jaipur.⁸ To its east, it was largely connected to Bharatpur while located to its south and west was Jaipur.

Forests, Habitat and Protection:

The Aravallis cut across this region for around 90 kilometers in a northeast-southwest direction. They enter the erstwhile State around Mundawar, cut across the capital city of Alwar and continue down south to the boundary of Jaipur around Bhangarh. At their highest they attain an elevation of over 700 meters⁴ and in several places form plateau like structures⁸. Sahibi and Ruparel are important rivers that used to be perennial until the hills in the region started getting heavily deforested.

The mineral wealth of the Aravallis in this region was known even in the 19th century.⁸ Metallic minerals such as copper and low grade iron are mined in the district at present along with non-metallic minerals such as silica, quartz, limestone and marble. Most of the marble quarries are located in the southern part of the erstwhile State in close proximity to forested areas.



Map 2. A 1930 forest cover map of Alwar District depicting locations with confirmed historical presence of tigers.

The western boundary of Alwar State was composed of another chain of the Aravallis that rose steeply.

In the first decade of the 1900s, forests covered an area of 950 sq. km. within the erstwhile State of Alwar.⁴ Most of this forest was restricted to the south-western side.⁴ The higher slopes of the hills supported species such as *Boswellia serrata* and *Anogeissus pendula*.⁸ At the base of hills, *Butea monosperma* was common.⁸ Large patches of *Phoenix sylvestris* were found around stream beds while bamboo was widespread.⁸

Protected areas were divided into two categories: 'rundhs' and 'bannis'. 'Rundhs' were the grasslands preserved to meet the State requirements while 'bannis' were the forested areas.⁴ In 1880s, the State supported around 700 horses for cavalry¹⁸ and over 500 for carriages, riding and other purposes. Apart from this, 27 elephants, 1400 camels and a large number of working mules were also maintained.¹⁸ All these animals, along with cattle in the ruler's possession meant annual supply of fodder had to be maintained. For this purpose, the State maintained 55 wood and grass reserves.¹⁸ The largest number of 'rundhs' were in Alwar tehsil (17) followed by 12 in Thana Gazi, 9 in Rajgarh, 4 in Tijara and some more in other tehsils.¹⁸ In spatial terms, the largest 'rundhs' were in Bansur tehsil.¹⁸ Each year, once the State requirement of grass was met, village livestock was allowed in selected 'rundhs' on paying a grazing fee⁴ which varied across species.¹⁴

Forests of Alwar were an important source of revenue to the State treasury. As early as the 1870s forest produce was being used to generate dye, mats and other products.⁸ Fruits were collected and then sold⁸ while wood was used for railways, charcoal and agricultural equipment.¹⁸ Bamboo too was collected from the forest and sold. For any kind of wood used from the forest, a tax was levied by the State.¹⁸ Forest villages in Alwar existed under the 'lambdaari' system wherein villagers paid revenue to the State towards collection of forest produce.^{5, 14}

During the reign of Maharaja Sir Jai Singh (1892-1933), serious efforts were made to increase the revenue generated from forests. At the turn of the 20th century, Sir Michael O' Dwyer was deputed the task of conducting forest settlements for both Alwar and Bharatpur States.²³ This was followed by the formation of a Forest Department under Mr. F.L. Coombs.²³ By 1911, it was decided to work the forest in Blocks.²³ Between 1910 and 1928 Reserved Forests were expanded by incorporating areas that were previously under the administration of 'zamindars', a decision that was strongly opposed and which resulted in reassessment of the order in 1935.²³

Until 1939, there were no restrictions on the number of trees that could be felled from a forest or a working plan for the State forests.¹ The onset of the Second World War led to a high demand for wood and consequently high prices leading to indiscriminate felling of trees across State forests and private land.¹ As per a 20 year rotation strategy, the annual quota for trees from Rajgarh and Sariska Ranges was limited to eight square kilometers.¹ However during the war period, between 1939 and 1941, this quota was exceeded.¹ Forests around Alwar town particularly faced severe assault.¹ Other areas affected by this war time demand for timber were Behror, Mundawar, Kishangarh and Tijara to the north; and Ramgarh and Laxmangarh to the east of Alwar town.¹

Game laws were strict and hunting without permission was illegal. Guns of travellers passing through forests of Alwar were sealed with wax to ensure they did not hunt during their journeys.²⁰ Hunting of peacock was prohibited on religious grounds, even for special guests.²¹ The *Shikarkhana* (*Akhet*) and the *Peelkhana* were under the supervision of the Forest Department.² The *Shikarkhana* handled monitoring of wildlife and shikar arrangements while the *Peelkhana* managed the captive elephants.

Wildlife:

Species of the plains such as blackbuck, chinkara and nilgai were common while the forests had tigers and leopards with other carnivores such as hyenas and caracals. Leopards were also common everywhere and could even be found in Alwar town.⁸ During the reign of Maharaja Jai Singh, bait would be tied for leopards within the compounds of the palace in Alwar with the main doors of the palace left open.²⁰ Wild pigs were very common in Alwar region until Rao Raja Shivdan Singh (1857-1874) permitted local people to hunt them, reducing their population significantly.⁸

Lakes such as Deoti close to the border with Jaipur attracted large numbers of waterfowl.⁸ Siliserh was another important lake built by Rao Raja Binay Singh (1815-1857) in 1844 by building a 40 feet high dam across River Ruparel.⁸ He also built a hunting lodge by the lake now called Siliserh Lake Palace. Fishing was prohibited in Siliserh and hence the lake had a high population of both fish⁸ and crocodiles.

Distribution of the Tiger:

The south and south-western part of Alwar supported a highly undulating topography and dense forest. Within this region was the main royal hunting preserve of Alwar, Sariska. Sariska was always famous for its tigers and many royal hunts have been conducted in this area. Tiger hunts were generally a large affair with several hundreds of game beaters accompanied by elephants, specially trained dogs and royal guests. A common practice was to conduct a large beat in a forest patch and shoot tigers that would be flushed out in the process.²⁰ The other strategy was to tie bait and wait in a shooting box for the predator to show up in order to hunt it. Remnants of many shooting boxes from the past era can still be found in and around Sariska.²⁰

Alwar, unlike most other princely states did not offer a bounty for hunting tigers, although rewards were given for hunting man-eaters.¹⁰ Until the mid 19th century, the tiger may have lacked the royal support it harnessed later. For instance, Rao Raja Shivdan Singh (1857-74) proposed to kill off all tigers in Alwar, provided the British were willing to pay for the expenses of building shooting boxes in order to facilitate the feat!¹⁰

Alwar's proximity to Delhi and easy accessibility from it made it a popular destination for those wanting to hunt tigers.⁶ It was possible to ride horse-back from Delhi to Sariska and was practiced by British adventurers until the motorized vehicle became available.³

Lt. Col. Fife-Cookson and his companion travelled to Alwar in the 1870s.³ They were guests of the resident political officer Captain Cadell.³ Since the then ruler was too young to rule, the administration was primarily managed by the political officer.³ Fife-Cookson in his shikar memories from Alwar, mentions of tigers in a thick strip of forest around 25 km west of Alwar. During their short travel west and then southwest of Alwar, they encountered seven tigers.³ These were sighted at Sirawas, Natosir (most likely Nathoosar), Kushalgarh and Kankwari.³ Although, the duo condescendingly rejected the shooting boxes as an unfair practice of hunting animals, they did not seem to worry about the ethics of leaving a few wounded tigers in the forest and hunting four more.³

Maharaja Jai Singh is believed to have shot several tigers and was considered a great marksman.⁶ During his rule, he did not permit hunting of more than 4-6 tigers a year in the forests of Alwar.¹³ However, rules pertaining to sex and age of tigers may have been lacking. When Archduke Franz Ferdinand of Austria visited Sariska in February 1893, he hunted two tigers in Sariska in less than a week, although news for as many as four was obtained.²¹ One of the females killed was gravid with four young ones, revealed when she was skinned.²¹ The Archduke's hunting camp at Sariska for less than a week was more of a make shift

settlement. It comprised of 83 tents, 1793 men to assist with the shoot, 148 horses, several elephants, 39 dogs, 72 security guards, postal service department, artisans and trading merchants.²¹

Only a year before the Archduke's visit, in 1892, Maharaja Jai Singh had built a palace at Sariska to receive the Duke of Connaught.²¹ This palace is today being run as a luxury hotel on the edge of Sariska Tiger Reserve.

In 1933, Maharaja Jai Singh was deposed by the British. Post this, the British officers stationed at Alwar hunted on a large scale. We could not obtain much information on tigers in Alwar for the period between 1933 and the Indian independence, partly due to limited time frame for this study and partly due to lack of reliable sources for the required information.

Sariska remained a royal preserve until, an area of 456 sq. km. was notified a Reserved Forest in 1955.²⁴ followed by 492 sq. km. notified as a wildlife sanctuary in 1958.¹⁴ During this period, tigers were known to frequent areas such as Bandipul, Pandupol, Algal, Tarunda, Tuda, Chhailipaj, Ghamondi, Naldeshwar and Siliberi.²³ However, tiger shooting was permitted in the shooting blocks of the reserve on obtaining a valid shooting permit until 1955. The shooting blocks in Sariska were Siliserh and Akbarpur in Alwar Range; Rampur in Sariska Range; and Khoh and Ajabgarh in Rajgarh Range.²³ Simultaneously, as per the Working Plan of Sariska, felling continued in this region between 1955 and 1968. In late 1960s, tigers were known to occupy Bandipul, Pandupol, Siliberi, Sariska, Kalighati, Ajabgarh, Rampur, Sirawas and Akbarpur.¹²

The newly formed Indian republic was determined to earn revenue from forests, just as Maharaja Jai Singh was in 1920s. While timber felling and opening up of shooting blocks were considered important revenue generating exercises, presence of villages within the reserve was discouraged.

Until 1970s there were an estimated 16 tigers within the famous blocks of Akbarpur, Sirawas, Rampur, Ajabgarh and Sariska, with the latter two protected.¹³

In late 1960s, the Government of India decided to initiate the process of relocating families from within the Sariska National Park to reduce human disturbance to the forest. Around 1966-67, two villages Slopka and Kalighati were relocated out of the reserve.¹⁴ 'Guadas' or nomadic cattle camps were also relocated from within Sariska during this period.¹⁴ In 1977, 35 families from Karna ka Was and 69 from Kraska villages were relocated to an area along the periphery of the reserve.²⁴ Hence, Rundh Bandipul and Runds Dulawa were denotified to assist the process of relocation.¹⁴ Some families from Kraska were relocated to Sirwas and Bandipul. In short time, nine families from Kraska sold off their land and returned to the reserve,¹⁴ this time settling near Kundalka.

In 1979, Sariska became a Tiger Reserve with an expanded size of 866 sq. km.¹⁴ In 1982, 400 sq. km. area was notified as a National Park²⁴ and underwent further expansion in size in 2012, increasing to 1,203 sq. km.

Year	No. of tigers in Sariska
1961	15 ²³
1966	21 ²³
1969	18
1970's	16 ¹³
1984-89	39 ²⁵
2003	25-28 ⁵
May 2004	16-18
September 2004	0
July 2008	1 female and 1 male (reintroduced individuals) ¹⁵
Feb 2009	2 females and 1 male (reintroduced individuals) ¹⁵
July-Aug 2010	3 females and 2 male (reintroduced individuals) ¹⁵
November 2010	3 females and 1 male (reintroduced individuals)
Feb 2011	3 females and 2 male (reintroduced individuals)
Feb 2013	5 females and 2 male (reintroduced individuals)
2016	10 females (5 reintroduced females); 2 sub-adult male & 2 male (reintroduced male) ²⁶

Decline of Tiger and other Wildlife:

Large scale deforestation started in Alwar around the Second World War when the demand for timber increased sharply. Thereafter, with Indian independence around, large parts of the State forests were auctioned off for charcoal and timber. This was followed by continued deforestation in the area between 1955 and 1968 based on the guidelines established in the Working Plan for the area. Cumulatively, the outcome resulted in massive ecological to the forests of the region. Rivers such as Arvari and Ruparel almost stopped flowing and wildlife populations declined sharply.

With respect to wildlife, Alwar's easy approach from Delhi attracted many people with aristocratic leanings to this area to hunt tigers. This meant high pressure on tigers in this region. Furthermore, the newly formed Indian Government in its provisional draft budget of 1948-49 was already demanding why there was no mention of 'shikarkhana' and 'peelkhana'.² With respect to 'peelkhana', the order was to "immediately" dispose of the elephants and with respect to the 'shikarkhana'; the final version of the budget was expected to include a budget for destruction or "management" of crop raiding animals or other wild animals.²

Until the 1950s, the plains of Alwar had an astounding number of blackbuck and wild pig. Around the same time, sambar and chital were common around Sariska while leopards were found across large areas. In 1961, there were an estimated 15 leopards in Sariska which increased to 25 in 1966 as per Forest Department records.²³ Chital numbers had declined drastically by the late 1950s, when a visitor to the area saw no chital.²⁰ As per Forest Department records in 1961 there were only 12 chital left in Sariska. No sloth bear was reported in the 1961 or 1966 Forest Department census.²³ Only in recent years a single

sloth bear is being regularly sighted in Sariska. By 1985, chital populations had recovered,²⁰ although the drought of 1988 that followed took a massive toll on ungulate populations in this region.²² A group of students and faculty from the Wildlife Institute of India, on field visit to Sariska in 1988 encountered 103 dead sambar, 32 dead chital and 18 dead nilgai in an area of 50 km² of Kalighati in Sariska.²² Post the drought, ungulate populations once again increased and continue to exist in large numbers, albeit restricted primarily to the Kalighati area.

Extinction of tigers from Sariska:

In May 2004, a Forest Department census declared 16-18 tigers within Sariska TR. However, by September 2004, there were no direct sightings or indirect evidence of tigers in Sariska. It was soon realized that all tigers of Sariska had been poached. The news was alarming and put enormous pressure on the Central and State Governments to rectify the disaster.

In order to undo the damage, eight tigers (five females and three males) were shifted to Sariska from Ranthambhore Tiger Reserve between 2008 and 2012.

However, all was not well within this reserve. Of the tigers introduced in Sariska, a male was killed by poisoning in 2010. This left one male and three females in the reserve in late 2010, until another male was reintroduced in February 2011. Until 2012, no females bred. High levels of disturbance within the reserve were held responsible for the lack of reproductive success of the females. Only in recent times has the population of tigers in Sariska started to breed increasing the tiger numbers to 14 within the reserve.

There are 32 villages within Sariska Tiger Reserve. Of these 10 are located within the area notified as a National Park and have been due for relocation since 1984.¹¹

Of 11 villages within the Core Zone-1 of the Reserve, three claim to be revenue villages with land rights.¹⁴ Post the mass scale poaching of Sariska's tigers, there has been enhanced attention being paid to relocation of villages from within the core area of Sariska. Majority of the population (87%) living within the reserve belongs to the Gujjar community and owns livestock comprising of over 20000 animals.¹⁴ In the last decade, Bhagani, newest of all villages,¹⁴ was relocated in 2007.¹¹ This was followed by relocations of Umri, Rotkala and Kankwari villages in 2012-13.

Other than human pressures within the reserve, Sariska also has two highways, Alwar-Thanagazi-Jaipur and Sariska-Kalighati-Tehla Roads traversing through 44 kilometers of the Reserve.¹¹ In recent times, there have been proposals to widen NH248A, a road that is frequently visited by one of the reintroduced tigers.

The pressure on forests is further escalated by an expansion of area under mining. There are several mines operating along the periphery of Sariska Tiger Reserve while areas such as the Kahrani Hills in the Tijara Reserved Forests in the north-eastern part of the erstwhile State have been completely destroyed.⁹

Proximity to Delhi, high human pressures and areas rich in mineral and forest wealth can be seen as important reasons for the decline of Alwar's forests and wildlife. However, recent conservation interventions in Sariska may allow some tigers to inhabit these forests for at least some time to come.

For the purpose of this study, we unfortunately could not conduct a field study and all information included here is based on published literature or in rare cases limited documents from the Rajasthan State Archives. This leaves large loop-holes in our knowledge of the tiger and its distribution in this landscape and a detailed picture of tiger distribution from the past cannot be shared for this region.

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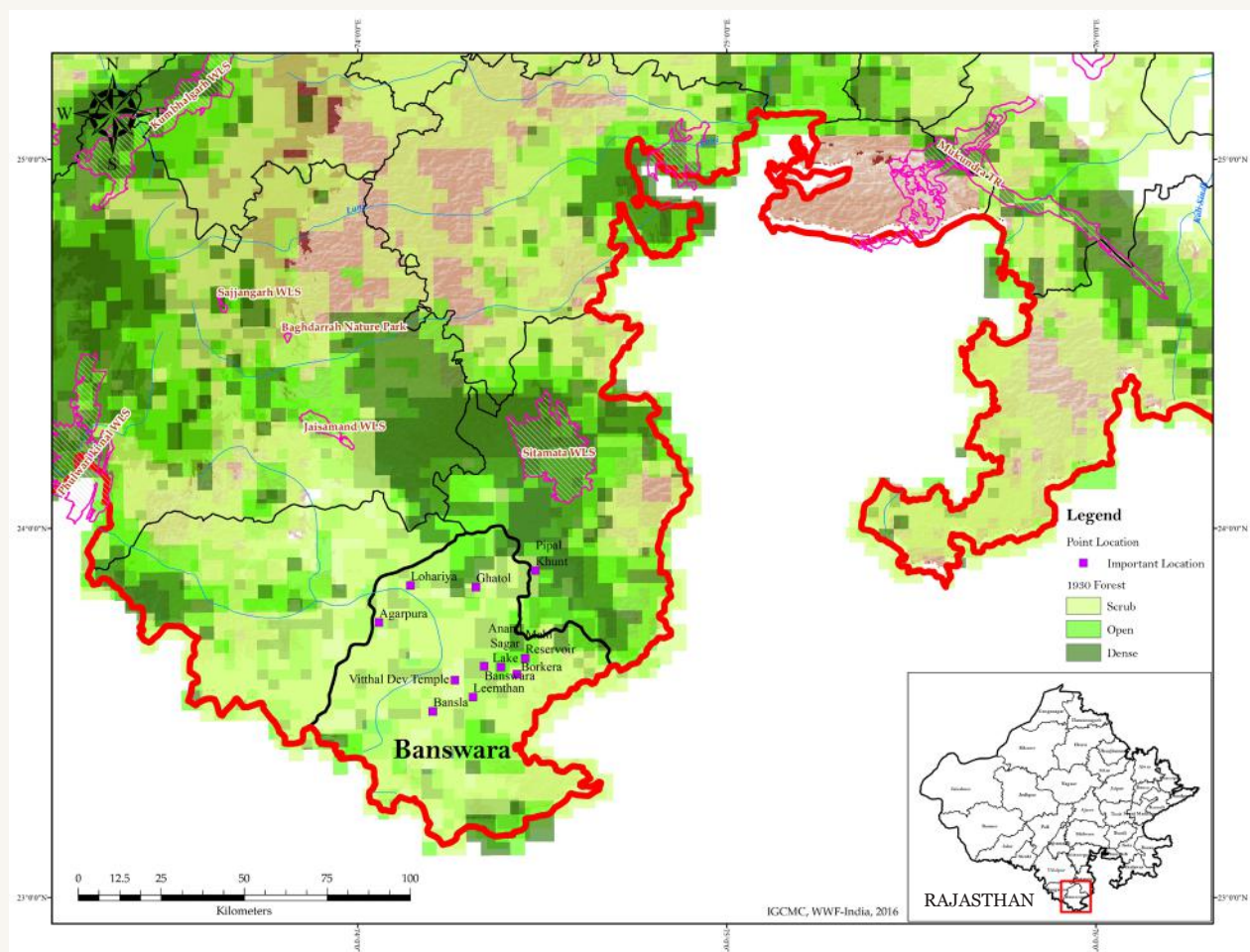
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3. Banswara

Banswara derives its name from the Bhil chieftain, Vasna from who the State was originally conquered in around 1530.³ However, others believe the name ‘Banswara’ has its origins in the word ‘baans’, indicating that the area was dominated by bamboo.

Banswara is located in the Vagad region of south-eastern Rajasthan. The western and southern parts of this erstwhile state are relatively flat while to the east high hills containing elements of the Malwa Plateau exist. River Mahi forms an integral part of the State, entering it from the south-eastern side and then flowing straight north. Once the Mahi reaches the northern boundary of Banswara with Mewar, it turns west and flows in a southerly direction forming a boundary between Banswara and Dungarpur. Anas is another important river flowing through the southern part of the region. To the south, erstwhile states of the Central India Agency such as Jhabua and Ratlam bordered Banswara. Banswara was considered one of the most beautiful parts of Rajputana, especially post the monsoon season.



Map 3. A 1930 forest cover map of Banswara District depicting locations with confirmed historical presence of tigers.

Forests, Habitat and Protection:

This region receives an annual average rainfall of around 92 centimetres, being one of the wettest in all of Rajasthan. High precipitation and dense forest supported numerous small rivulets and streams which flowed through the State.

Large parts in the north of the State were dominated by forests of *Tectona grandis* while common species included *Dalbergia latifolia*, *D. sissoo*, *Adina cordifolia*, *Butea monosperma* and *Ficus* species.

The dominant community in the northern part of the region comprised of Bhils who practiced a form of shifting cultivation called 'walar,' while in the relatively flat west and south-western parts of the State, irrigated agriculture flourished^{1,3}

The north-eastern part of the State comprising of Pipal Khunt was highly undulating and well forested. This forest was contiguous with the forests of Pratapgarh and the present day Sitamata Wildlife Sanctuary. Pipal Khunt today is part of Pratapgarh district.

Not much information exists on the wildlife laws prevalent in Banswara. However, it appears there was a Forest Department which was constituted in 1901⁴ and the State had its own Forest and Wildlife Act. Generally hunting of rare large carnivores such as tigers and leopards was restricted to the ruler and his family.

No revenue was generated from forests until early in 1900s when a trained Forest Officer was jointly employed by the States of Banswara, Dungarpur and Pratapgarh.¹ The aim of this recruitment was to better manage the forests of the region and to identify areas to be considered 'reserved'.¹

Wildlife:

Despite large area under forest cover, Banswara was never known for large carnivores although leopards, hyenas and sloth bear were found across the State.³ Species such as the wild pig, sambar, chinkara and blackbuck were commonly hunted by the erstwhile rulers of the State. Tigers were rare. Small mammals such as porcupine, hare, common palm civets were frequently encountered¹ and can be seen even today.⁶ Pangolin was also found in the region and even received protection beginning as early as 1928.⁵

Wild pigs were abundant and Banswara became known for highly successful pig shoots which fetched large bags. In one shoot at Lohariya, Maharawal Sir Prithvi Singh (1914-1944) along with his seven brothers and other guests shot over 50 wild pigs.⁶ Wild pigs were sometimes provisioned and audis or shooting boxes constructed to shoot selected large boars. Some places known for wild pigs were Vajwania, Chitrawala, Agarpura, Vaasla, Saritaniwas, Jhantra, Rayanghati and Kaabra Dungar.²

Close scrutiny of the State hunting diary from 1919 to February 1935, reveals that hare and wild pig were the most frequently hunted species by the ruler and his brothers. 'Deer' which in most likelihood implies sambar, blackbuck and chinkara, came next. The region was also known for its large sized sambar and a healthy population of blackbuck.⁶

Leemthan was a popular place to hunt leopards followed by other places such as Bai Talab, Saritaniwas, Chokhala and Rayan Mata.² Some other places where leopards were found include Jhantaliya, Vitthal Dev, Bor Kheda, Daabri and Johariya.²

Other large carnivores such as leopard, sloth bear and hyena were also found in the region, while wild

dogs and wolves were rare.¹ Crocodiles were common in River Mahi and its tributaries. They were also frequently found in the numerous tanks of the erstwhile state. During winter, large populations of migratory waterfowl could be seen in the tanks spread across the area.¹

Some of the known shooting blocks of the region included Pipal Khunt, Lohariya and Sawaimata Bhandariya,² most of which still have good forest cover.⁶

Distribution of the Tiger:

No evidence of tigers has been established from Banswara since early 1900s. However, Sankhala mentions of the dry teak forests in Pipal Khunt area supporting tigers.⁷ In most likelihood, this was a reference to a rare transient tiger entering Banswara from the forests of Pratapgarh.

The shooting diary of Maharawal Sir Prithvi Singh covering the period of 1919-35 has four entries of tigers shot. First of these, which has an entry for tiger shot in the name of 'Moti Singh' in most likelihood, is an error. Apart from that three other entries have been made. These include tigers shot at Kaleta and Bhandara, both in Danta State of Gujarat and one individual shot at Garot near Kua Khera in Mewar. This implies that no tiger was shot in Banswara during this period.

However, it is believed that at least until the first half of the 1900s, tigers did travel through the forests of Banswara when they moved between Dungarpur and the Panchmahal area of Gujarat, although they never became residents in the State.⁶ Maharawal Jagmal Singh mentions of how he has seen tiger trophies shot by his family members in Dungarpur but never of individuals shot in Banswara. This may be an indication of the area having lost out on tigers by the beginning of the 20th century or rare presence of the species in this area.

Decline of Tiger and Other Wildlife:

No clear information exists on the period and causes for disappearance of the tiger from Banswara. Although it is clear that the area was never famous for tigers despite its vast forests, plenty of prey and water availability throughout the year.

Around late 1960s mass deforestation took place in the region and large areas were converted to agricultural land.⁶ Such changes in land-use resulted in loss of habitat for species such as blackbuck and chinkara which disappeared from the landscape.⁶ Sambar populations across the State also crashed rapidly with almost none left today.⁶

In the last decade, few species seem to have however made a comeback. These include leopards and wild pigs. Anand Sagar, a small forested area almost in the city of Banswara has a pair of leopards which has also been sighted with cubs in the recent past.⁶ Wild pigs meanwhile are rapidly reaching a stage of becoming a menace, especially in areas such as Ghatol.⁶

Few chital can be occasionally seen in Pipal Khunt area since it is contiguous with Sitamata Wildlife Sanctuary which has a small population of the species.⁶ Similarly, very few chinkara survive in the Singapura Forest Block.⁶ Crocodiles which were found in most tanks across the region also seem to have vanished, with a single individual in Anand Sagar that re-colonized the tank few years ago.⁶ The dam on River Mahi may have a role to play in the decline of this species, since crocodiles are known to be found in good numbers along the Mahi upstream of the dam.

Apart from land-use changes and vast deforestation, hunting may have been a cause for decline of wildlife in this region.

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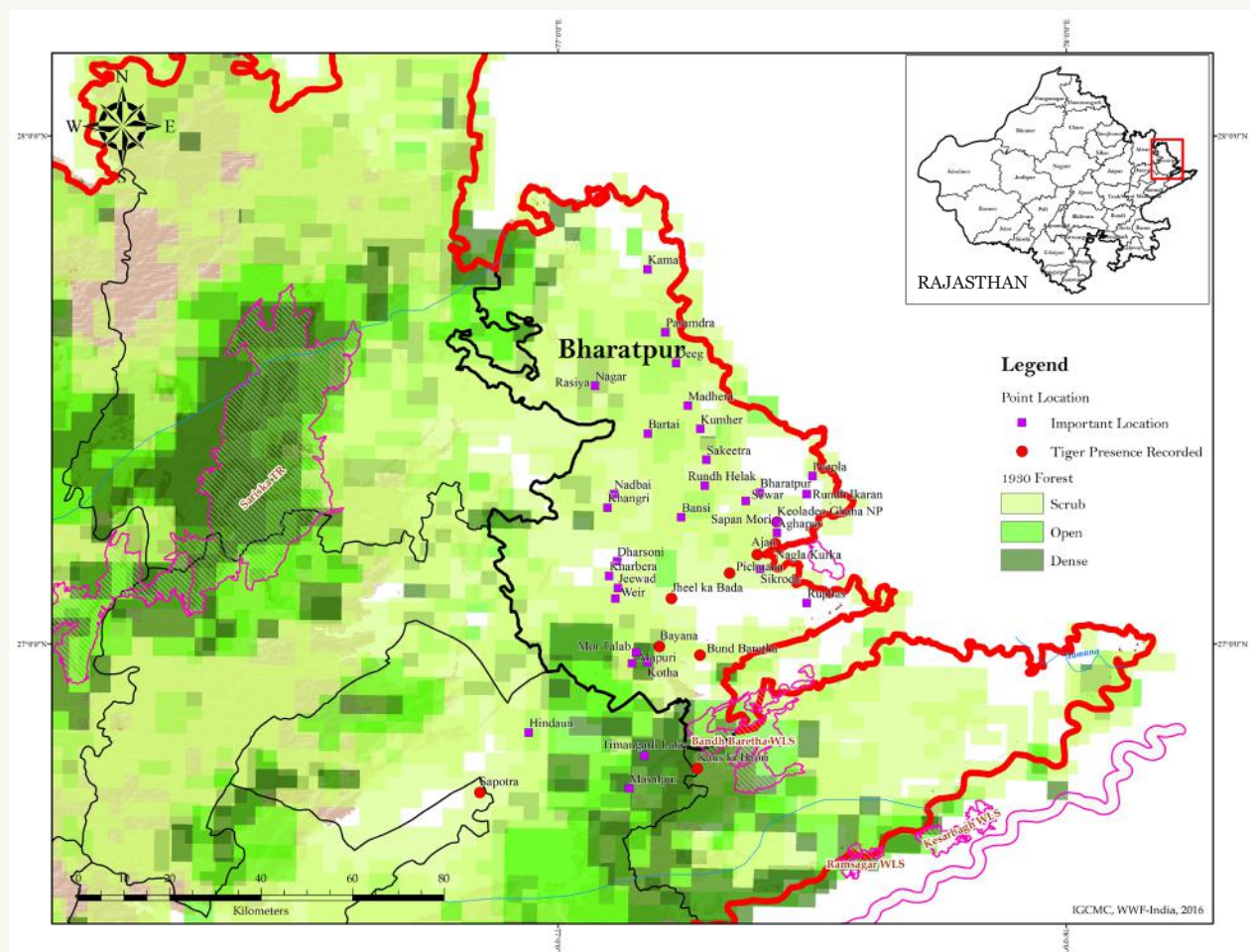
4. Bharatpur

Located in the fertile Indo-Gangetic Plain with River Yamuna to the north and Chambal to the south was the erstwhile State of Bharatpur. The region was dominated by wetlands and swamps, many of which provided protection to the State against invading armies such as those of Ahmed Shah Abdali in 1756 and 1761 followed by that of Lord Lake in 1805.⁹

Forests, Habitat and Protection:

Most of northern Bharatpur is flat with a small depression while areas further south have hills.³ Closer to River Chambal in the south, the region is dominated by ravines and is called 'Dang'. This region was known to be inhabited by dacoits² and hence had few settlements and little area under cultivation.

Areas in the northern part of this erstwhile state had scattered forests mostly on isolated hillocks while the southern parts had dense forest dominated by *Boswellia serrata* at higher elevations while the slopes supported *Anogeissus pendula*.³ Rundhs or grasslands were present in the central area along with Ghanna or forested areas that were managed to provide grazing to cattle of Bharatpur city.²



Map 4. A 1930 forest cover map of Bharatpur District depicting locations with confirmed historical presence of tigers.

Some of the important 'Rundhs' through which the annual requirement of grass for the State was met were Rundh Ikran, Helak, Rani Hauz, Sakitra, Chak Maharaj Paltan, Madhera, Rasia, Paramdra, Guadavali, Rupbas, Ghana Jiwad, Kotha, Mortalab, Alapuri, Ajan and Kumher.¹

Unlike most other parts of erstwhile Rajasthan, Bharatpur State gave local *zamindars* direct control of their forests until 1905.³ There were several departments that dealt with various aspects of forestry. These included the Rundh Department which collected grass from the State preserved Rundhs and supplied it to various State departments; Ghana Department was responsible for management of grazing for cattle from Bharatpur city; Forest Committee managed the forests in the outlying tracts; Keoladeo Ghana Department managed the wild cattle and the shooting preserve; and the Imarat Department supplied charcoal and firewood to the ruling family.³

The Bharatpur Forest Act 1925¹⁰ brought about the first set of dramatic changes aimed towards better management and protection of the State forests. It resulted in Forest Circles being formed at Bharatpur, Deeg and Baretha and higher control by the State of forests previously under the control of *zamindars*.³ Around 1929, the Shikargah and the Jangalat Department were separated and established as two separate departments. In 1934, the Bharatpur Forest Act, 1925 was replaced by the Bharatpur Forest Act, 1934 which underwent further amendments in 1942.³ Under the 1934 revisions, for the first time, 62,344 bighas of land was demarcated and declared Reserved Forest.³ Around the same time, changes were also made to the existing system of hunting. From 1930 onward, Bharatpur maintained a closed season for hunting from 31st March to the 15th of September. It also started to charge a fee of Rupees 20/- to issue shooting passes.¹²

Generally, wildlife was zealously protected in Bharatpur which also meant rapid increase in wildlife populations. In December 1938, villagers of Weir wrote to the State requesting for reduction in populations of crop damaging wild animals and allowance for more crop protection gun licences.¹³ The letters also requested for permission to allow the farmers to shoot some pigs, nilgai and one or two blackbuck. With respect to blackbuck they further pleaded permission to consume its meat. In response to the desperate plea, the State ordered its Forest Department to destroy a maximum of 30 pigs, eight nilgai and two blackbuck once a month in rundhs with very high populations of such ungulates.¹⁴ These included rundhs of Bansi in Weir, Sikroda in Rupbas and in tehsil Bharatpur (Nagla Bartai, Aghapur, Samal Das and Udra). However, meat of animals shot was under no circumstances to be sold to public nor was anyone permitted to shoot these animals without permission from the President Council of State or the Ruler.

Wildlife:

With its myriad wetlands, Bharatpur was always known for its migrating waterfowl and high avifaunal diversity of over 400 species.⁷ One wetland that attained global attention was Keoladeo Ghana, a royal hunting reserve covering 29 sq. km. located at the confluence of the Banganga and Gambhir Rivers. Keoladeo was the brainchild of Maharaja Ram Singh who was inspired to build such a place after his visit to England. Initially, present day Ghana was an enclosure fenced with an over 25 kilometre long fence to impound stray cattle that had become a menace affecting over 200 villages.² The cattle, a repercussion of animals being left astray post the war and for religious reasons had become a severe issue when their population was further increased by new recruits from the famine of 1877-78.² The problem took such magnitude that by 1889, the area under cultivation in the Northeast Parganas was reduced by almost 60%, forcing the government to construct a 65 kilometre long fence to restrict the menace to Bharatpur territory.²



Plate 1. Records of waterfowl hunted during the princely era in Keoladeo Ghana National Park

The stray cattle enclosure at Ghana with around 5000 cattle started drawing large carnivores such as leopards and tigers, some of which were shot around 1899.² By 1900, the lakes at Ghana were filled with water and shooting butts lined with trees to shoot from. In December 1902, Lord Curzon inaugurated the reserve⁷ with a bag of 540 birds in one day. This figure was to be challenged later with records such as 4273 birds by 39 guns in November 1938 during Lord Linlithgow's visit⁷ and 2666 birds with 25 guns in January 1918 in a shoot organised for Lord Chelmsford. Keoladeo Ghana also supported rare wildlife such as leopards, fishing cat,⁸ hog deer^{4, 8} and an occasional tiger.^{2, 8}

South-east of Ghana was located the most important hunting preserve of Bharatpur, Bund Baretha or Kishan Sagar. The chain of Aravallis around the reservoir supported wildlife such as tigers, leopards, wild dog, wolf, sloth bear, sambar, chital and wild pig while the reservoir was a home to crocodiles. Chinkara were only found in this region of Bharatpur.⁸

Bayana Fort, also called Banasur is located 15 kilometres from Bund Baretha on a hill with a steep cliff face. The area still supports species such as leopards,⁸ one of which was camera trapped in 2005.¹⁹

In fact, leopards were plentiful in the region. State records indicate a rise in cases of conflict between leopards and humans around 1930s. During this period, some of the places from where leopards were reported include villages such as Dharsoni and Kharbera in Weir tehsil, Nagar, Deeg, around Raisa and Peepla, Khangri in Nadbai tehsil¹⁵ and in Aghapur tensil.¹⁶ In fact, one individual took to killing horses at the stable at Bayana.¹⁵ In most of these cases, the Janglaat or Shikargah Officers were ordered by the State administrators to destroy the problem animals. However, strict measures were taken to ensure that the correct individual was destroyed and their skins preserved.

Even in the 1960s, leopards were common in Bharatpur. Rao Raja Raghunath Singh recollects a leopard having killed his pet dog in 1965 within the boundaries of his house, Raghunath Niwas, located in Bharatpur city.

Some other places around Bharatpur known for different wild species included Kama and Hirankhuri for blackbuck, Marichuan for both blackbuck and chital and Sapanmori for wild pig.¹⁸ The State also purchased lions around 1929 which were kept at Sewar¹⁷ and then hunted. Trophy of one at Baretha and a cub at the Public Museum in Bharatpur bear testimony to the experiment. Forests around Baretha also had *dhole*, trophy of one of which shot in 1945-46 used to be displayed at Baretha.

Rupbas located to the northeast of Bharatpur was probably the original hunting ground for rulers of the region. It used to be the country residence of Akbar and had a shooting box.² In its neighbourhood was a forested area called Ghana which later became a shooting arena for the Europeans.²

Distribution of the Tiger:

The southern part of Bharatpur had forest connectivity with Sawai Madhopur via the forests of Hindon, Sapotara and Karauli. To the east, it also shared connectivity with forests of Dholpur. Comprising of Bund Baretha and Bayana, this area was known for tigers and was the main tiger hunting preserve of the erstwhile rulers of Bharatpur and their guests.

The Shikarkhana Department of the State was responsible for keeping track of tiger movement through the State forests. Field staff would send messages regarding such movements to the capital city through the use of trained pigeons.¹⁸ Permanent shooting boxes called 'maala' were constructed in Baretha and can be seen even today. Both tying of bait and beats were used depending on the situation and guests involved in the sport. Elephants trained for tiger shoots were a common feature in shoots organised for special guests as indicated by old photographs.⁸

The Bayana reservoir, located to the west of Baretha, covered an area of around 10 sq. km. surrounded by ravines. In 1897, once the reservoir was constructed and water made available throughout the year, the area became a haven for wildlife.² Sukha Cheela in Baretha was particularly known for tigers. In February 1956 the Shah of Iran, Mohammad Reza Pahlavi visited Baretha with his wife, Soraya Esfandiary-Bakhtiari. They shot three tigers in one beat in forest of Barhana in Biana. In 1958, the royal guest was King Zahir Shah of Afghanistan.⁵ He saw a tiger in Ghana and was spellbound by it, to the extent that he did not even photograph it, lest he missed out on time watching it.⁵ When they saw another individual at Baretha, they could not hunt it due to a missed aim.¹⁸ Although some confusion does exist on the year of the last tiger shoot in this area, it was most definitely in the first half of 1960s, and in most likelihood 1962.¹⁹

Between 1888 and 1964, this area witnessed many shoots, accounting for over 250 tigers.¹⁸ Col Shyam Singh counted 80 tiger trophies and 25 carpets made of tiger pelt at the Baretha shooting lodge, majority of which came from tigers shot there.

Sapotra located at the junction of Dholpur and Karauli had mostly ravines with bushy forests. This area would also get migrating tigers and sometimes mothers with cubs. Once again there is lack of clarity on the year in which the last tiger was shot in this area. Based on conversations with Col. Shyam Singh, it appears the last tiger shot in Sapotra was one shot by Mr. Marshall, the General Manager of Rolls Royce, in December 1967. However, the last organised tiger shikar camp in Sapotra was held in December 1965.⁸

Occasionally tigers would travel up to Keoladeo Ghana, most likely travelling from Baretha to Ajan Dam via the Pichuana Canal which supported tall grass providing shelter to the animals. In 1958, King Zahir Shah and others with him witnessed one individual at Ghana,⁵ as mentioned earlier. Post 1950s, not

much information exists on tigers visiting Ghana. It took almost half a century for another tiger to reach Ghana. From November 1999 to June 2005, a tigress, most likely a former resident of Ranthambhore, occupied Ghana.⁸ Then again in October 2010, a tiger from Ranthambhore, T-7 migrated to Ghana and stayed there until it was trans-located to Sariska in February 2011.

Apart from protected areas, tigers were also reported from other isolated parts of Bharatpur. In 1927, Maharaj Kishan Singh shot a tiger at Jheel ka Bada, around 25 kilometres from present day Bharatpur city.¹⁹ Same year he shot another tiger at Kans ki Baori,⁸ although the latter is within Baretha region. Sometimes, tigers even ventured in to close proximity to human habitation. In September 1934, orders were given to the Janglaat Officer to destroy a tiger that was spotted near a deserted house in Nagla Kurka near Kalyanpur since it was sighted too close to the village.¹¹

Decline of the Tiger and Other Wildlife:

Until early 1960s, tigers occupied a substantial part of the forested areas of Bharatpur, albeit in very small numbers. Within the Bharatpur Forest Division, which included the fertile forests of Alwar, Dholpur and Karauli several tigers were shot in the 1960s⁴ (table below).

Year	No. of tigers shot including those shot illegally
1962-63	9
1963-64	13
1964-65	3
1965-66	11

Although the veracity of the above mentioned figures may be questionable, they do act as indicators of presence of tigers in this region during the mentioned period. By late 1960s, tigers had disappeared from the Bayana and Bharatpur Ranges of the Bharatpur Forest Division.

Some speculate that within the last century over 250 tigers were killed at Baretha and Bayana alone.¹⁸ In fact, a carpet made by the famous taxidermists, Van Ingen and Van Ingen which found place in the royal house of Bharatpur was made of around 100 tiger skins, almost all of them shot in this region.¹⁹ By 1970s, not only did the tiger vanish from forests of Bharatpur, but also most other wildlife and forests. Even leopards which were commonly seen in Ghana had disappeared with the last one having been shot in 1965 near Sotan Wale Hanuman Temple.⁸

By 1970s, the forests had started to disappear. The white and red sandstone quarries at Baretha and Bansi probably struck the final blow to wildlife and its habitat in this region.

Species such as blackbuck have almost vanished from the region with places such as Hirankhuri having none left.¹⁸ Chital also underwent a severe decline in early 1960s due to hunting by free-ranging dogs in Ghana,⁶ although the species has made a successful recovery in recent times in the same region. Wolves which were regularly sighted around Kans ki Baori, Timangarh Lake and Masalpur border have also undergone a drastic decline, although one was recently sighted in Ghana.⁸ The only species to have increased in numbers in recent years are nilgai and wild pigs.

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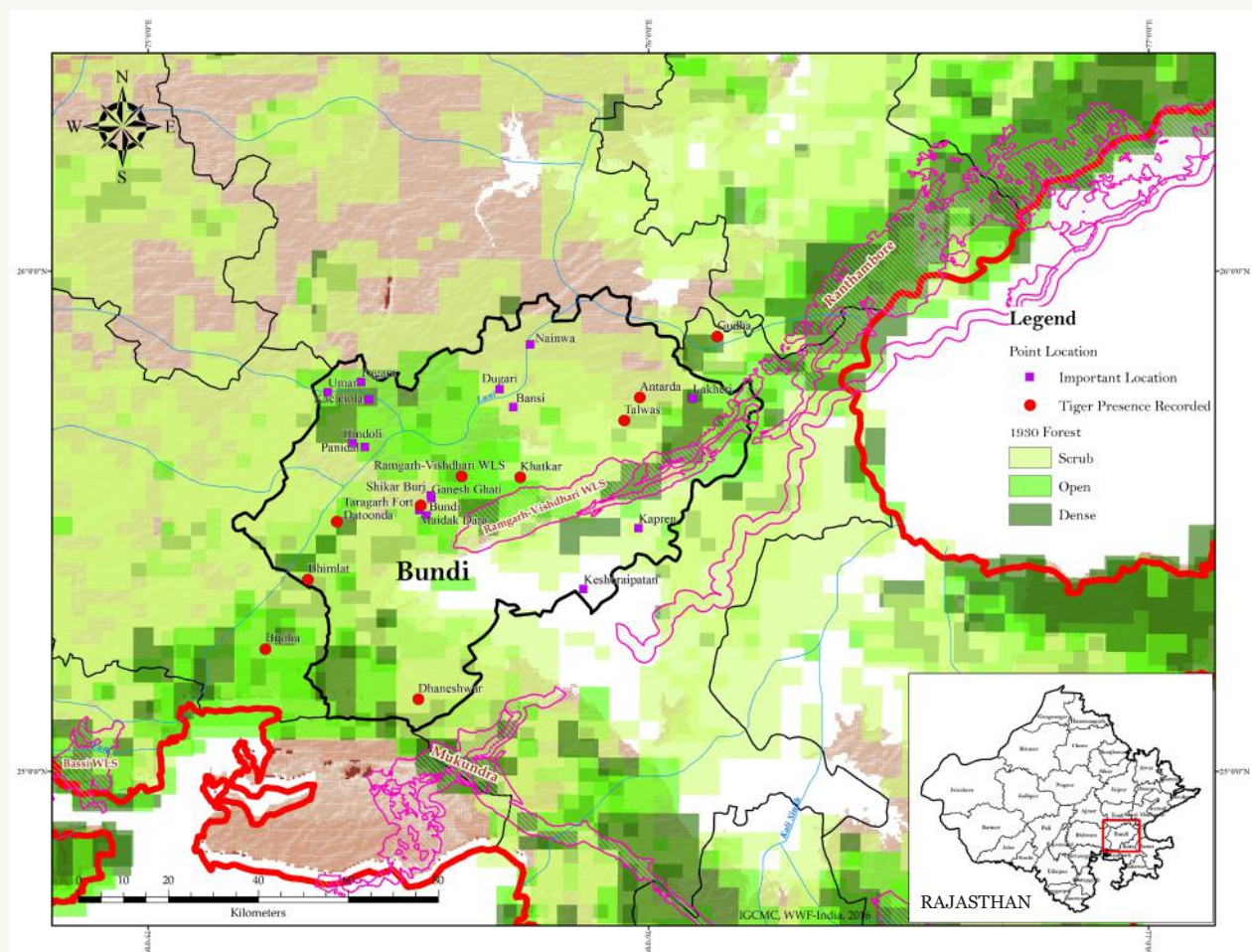
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5. Bundi

Located in south-west Rajasthan, the erstwhile State of Bundi was surrounded by Tonk to the north; Mewar to the west and Kota to the east. This region is divided into two almost linear halves by a range of hills that run between the erstwhile States of Jaipur and Kota. Within Bundi district, this range can be naturally crossed at only four locations, two of them being, the Maidak Dara- through which the road to Deoli passes and Ganesh Ghati which gives way to the road to Tonk.¹

The grand capital of the State was located in a narrow valley called Bunda ka Naal, named after Bunda, from whose grandson Rao Deva conquered the city in 1342.¹ The Central Bundi Range passes through the city running in a northeast to southwest direction. The highest point in the region attains an elevation of 547 metres.²

The town of Bundi was considered one of the most beautiful during the Raj.^{4, 13} Until the end of the 19th century as revealed by Rudyard Kipling, Bundi was an unfriendly place to Englishmen. Kipling was amongst the earliest foreign guests to Bundi. He lived in Sukh Mahal, the royal summer palace and wrote a part of his book, 'Kim' living there.



Map 5. A 1930 forest cover map of Bundi District depicting locations with confirmed historical presence of tigers.

Forests, Habitat and Protection:

In 1906, forests covered around 2300 sq. km. of the geographical area of the State.¹ This implies that almost half of the State was covered with forest during that period. Even in 1960s, the State officially had 1900 sq. km. under forest cover.² Most of this was dry tropical deciduous forest in hilly areas with species such as *Anogeissus pendula*, *Acacia catechu*, *Boswellia serrata*, *Mimusops indica* and *Sterculia urens*. At relatively lower elevations, common species included *Butea monosperma*, *Azadirachta indica*, *Ficus* species, *Tamarindus indica*, *Emblica officinalis* and *Diospyros melanoxylon*.² Generally trees in the hilly areas grew slowly and were stunted in height.² Plateau like features atop the hill ranges had grasslands.

In riverine belts, *Syzygium* species grew prolifically. Keshorai Patan was one such place known for its *Syzygium* forest called 'Jambu Kalan' located on the banks of River Chambal.¹⁵

Apart from the forests, the hill ranges around Bundi were rich in minerals such as limestone and sandstone. The Upper Vindhyan limestone found in this region is well exposed and is available in large quantities. Value of this resource found in this area was recognised long ago. In 1913, a Mumbai based company called Killick, Nixon and Company was given a lease for 30 years to manufacture lime and cement.⁵ In 1917, the Associated Cement Companies (ACC) established a cement producing unit at Lakheri which is today the oldest such unit in Asia.

Bundi had its own wildlife law and a Forest Department. Forests in the State were used to generate revenue and certain areas were given out for coal coupes.¹⁹ However, the extraction was not systematic, although the Forest Department did generate a revenue of rupees 4000 in early 1900s.¹⁴

People continued to occupy certain parts of the forests and it was not until 1949, that the Forest Department took up the exercise of settlement of forests.² Areas designated for shikar were particularly well protected,² especially during the reigns of Maharao Raja Sir Raghubir Singh (1889-1927) and Maharao Raja Bahadur Singh (1945-77).¹⁶

In 1933, a state rule was passed that prohibited everyone in the State other than the ruler from shooting sambar.⁸ This was followed by another order in June 1939 that prohibited anyone without a permit to hunt or fish in the State.⁸ Furthermore, permits would be given only to hunt hare, waterfowl and partridge, that too for a limited period each year.⁸ Violation of the orders could result in fine of any amount ranging between Rupees 75 and 500 depending on the species killed, in addition to confiscation of the weapon used and the animal hunted.⁸ This was met with some opposition from the jagirdars of the State, who requested for a modification in the rule that would allow them to shoot within their jagirs.⁸ However, their plea was not honoured by the ruler. Only the ruler and his special invited guests were permitted to shoot in the State. Even members of the royal family were forbidden to shoot without the ruler's permission.¹⁶

In 1945, forests of the State were distributed into several ranges. These included the City, Hindoli, Southern, Nainwa and Kapren Ranges.⁸

Wildlife:

Forests of Bundi were famous for their 'big game'. James Tod, in his annals mentioned that the ruler of Bundi, Rao Raja Bishen Singh (d. 1821) had slain more than 100 lions and many tigers.¹³ Of course, such passion for hunting quarry as dangerous as the lion came at a cost. During one of his hunting expeditions, the ruler was attacked by a lion and as a consequence lost one of his limbs, which crippled him for the

rest of his life.¹³ By the beginning of the 1830s, lions had been extirpated from Bundi. However, tigers, bears and leopards were still found in the State.¹

In 1899-90 much wildlife of the State was killed in a severe drought, particularly ungulate species such as chital and sambar.¹ However, in years to come with hunting restricted to the ruler alone and his invited guests, populations of wildlife recovered. Even in 1960s, Bundi had a fair representation of all species found in its forests 50 years ago. Chital were found in blocks such as Ramgarh, Khatkar and Dhatnoda; sambar in most hills and along banks of the Chambal; four-horned antelope in Gudha, Dhaneshwar and Datnoda while chinkara and blackbuck in the relatively flat areas.² Wild pigs and nilgai were common across most forests, the latter not being killed due to religious sentiments associated with its name.² Forests such as the Jambu Kalan near Keshori Patan had very high jackal populations.¹⁵

Lions and cheetahs, however, may have been kept in captivity as seen in the many murals in Taragarh Fort and the palace. Some of these animals were kept at Phool Sagar which hosted a menagerie at the time of the visit of Queen Mary in 1911.⁵

Distribution of the Tiger:

In 1890s, when Rudyard Kipling visited the hospital in Bundi, he found a register that listed ailments of people visiting the hospital. One amongst them, occurring frequently, 'three-four cases a week' was 'lion bites', in most likelihood meant to be, 'tiger bites.'⁴

With its large tiger population, Bundi was a popular place for those wanting to shoot tigers. While generally tiger hunting helped strengthen relations between the invited and the invitee, in case of Bundi it may have been different. Tod mentions of a feud between Rao Surajmal of Bundi and Maharana Ratan Singh of Mewar which started while they were on a hunt and ended with both of them killing each other in 1531.¹³ This was to repeat itself in 1773 when Rao Raja Ajit Singh of Bundi, apparently accidentally, killed Maharana Arsi Singh of Mewar while they were on a hunt. Not always were such feuds settled with death, M.K. Ranjitsinh mentions that sometimes indulging in childlike fake military attacks on the opponent in the comfort of your own state also sufficed.

Tiger hunting in Bundi also inspired many artists. Bards wrote couplets inspired by incidents that took place during hunts while artists specialising in the famous Bundi paintings recreated scenes from such events. A painting in the Bundi Fort depicts a scene where one of the rulers of Bundi aims his gun towards two tigers, drinking water at the Shikarburj, probably an indication of the presence of tigers in this area. Similarly, another mural at the Taragarh Fort depicts a scene of a tiger being hunted using bow and arrow from horseback. By 1870s, it seems bow and arrow and the spear had been successfully replaced with the matchlock and muzzleloader to shoot tigers and other animals in Bundi. Around the same time William Rice and his accomplices were hunting tigers in the neighbouring forests of Mewar, Indergarh and the Central Indian Agency.⁶ Rice had remarked how the forests of Bundi and Kota 'abounded' in tigers, however, the strict restrictions imposed on hunting the species by the respective rulers made it difficult to shoot in those territories.⁶

In 1901 and 1902, Maharaja Sir Ganga Singh of Bikaner (1887-1943) visited Bundi to shoot tigers and shot three tigers and procured four live cubs.³ These visits were followed by more. In May 1914, he shot two tigers of the eight reported or seen in ten days of being in the Bundi jungles.¹⁰ Two of those seen were females with at least four cubs between them. These were sighted or shot in Khaniyan, Bhimlat, Khatkar, Banskhole and Ramgarh.¹⁰ Almost no day went by without seeing a tiger.¹⁰ Few years later, in April 1938,

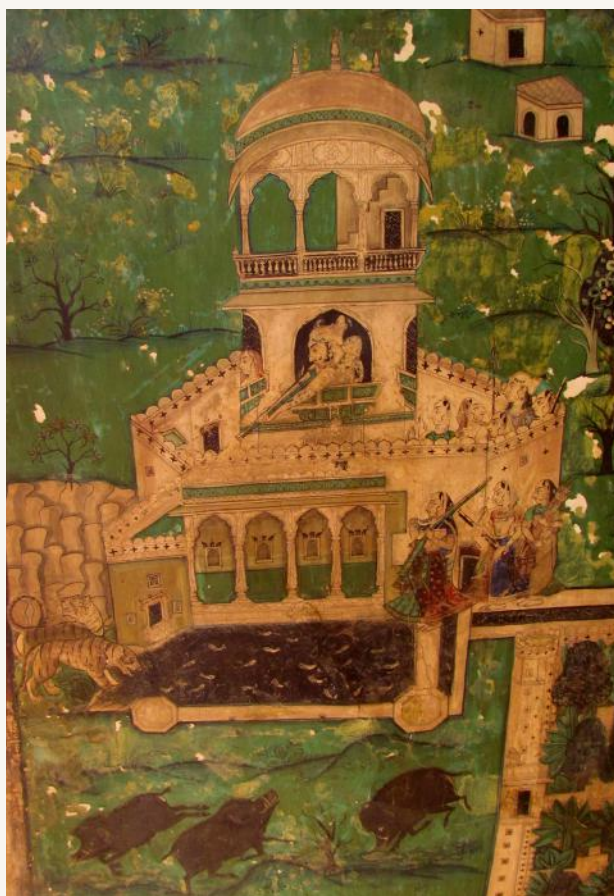


Plate 2. Left: Painting depicting ruler hunting tigers at the Shikarburj. Right: Photograph of Shikarburj taken during the study.

when his son, Maharaja Sadul Singh, visited Bundi, he clearly was to beat his father's tiger record at Bundi. Maharaja Sadul Singh shot six tigers in two days of being in Bundi, all of them at Bandra Pol and Bijolia.¹¹

From 1920 onwards Bundi started welcoming visitors and experienced high levels of tiger hunting. By this time the then ruler, Maharao Raja Raghubir Singh, had already killed around 100 tigers.⁵ On an average seven tigers were killed each year in this small kingdom.⁷ Although the earlier norm discouraged shooting female tigers, looking at some private records, it appears that either the rules had changed by the 1930s or they were disregarded. However, despite the hunting and changes in the habitat, Bundi still had 75 tigers in 1941.⁷

In 1950s, a tigress gave birth to two cubs in the forest around Phool Sagar.¹⁶ Around the same period, Christmas hunting parties with high-profile invitees became popular at Phool Sagar Palace.^{16, 17} In 1952, Lord Mountbatten shot two tigers in Bundi; one at Phool Sagar and another at Ramgarh.¹⁶ Two years before him, Maharawal Sir Lakshman Singh of Dungarpur also had to travel to a foreign state to meet his interest, considering by this time tigers were almost extinct from his State of Dungarpur. Just as his contemporary in Dungarpur preferred shooting in the Central Indian forests²⁴ instead of destroying his own stock, Maharao Raja Bahadur Singh of Bundi also preferred hunting tigers in the forests of Central

India.¹⁶ His daughter, Maharajkumari Mahendra Kumari was also known to hunt and as per some did shoot around two tigers and kept one as a pet at Phool Sagar.¹⁶ Around the same time, guests at Phool Sagar were often advised not to step out of their rooms at night since wild tigers were known to visit the palace and were given freedom to use the palace compounds.²³

Antarda, a principality of the State, located near Nainwa was also known for tigers. Usually while moving between Ramgarh and Ranthambhore, tigers would stop over in this region which had good forests and water holes. They occupied the forest behind the fort and in Kirniwala forest area.¹⁸ In 1945, with independence around the corner, tiger hunting regulations relaxed and many joined to participate in the royal sport. In 1945, Maharaja Virendra Bahadur Singh of Antarda shot two tigers in one night.¹⁸

Between 1955 and 1965, Maharao Raja Bahadur Singh alone shot 27 tigers in the forests of Bundi.²⁵ In 1963, at the age of 43, he shot his 200th tiger, whose skin he seems to have gifted to a friend, Ruth Shaw, who took it to England.⁹ In 1960s, tigers were known to inhabit forests around Ramgarh, Khatkar, Gandoli, Datnoda, Odena, Gudha and Dhaneshwar.⁹ However, these were changing times for the tiger and tiger-hunters. The Forest Department imposed a ban on shooting tigers for three and half months, starting 1st July. Visitors such as Maharaja Gaj Singh of Jodhpur, even on sighting a tiger in 1969-70, chose not to hunt it while Maharao Raja Bahadur Singh stopped hunting. Around 1974, a pair of tigers with cubs still could be seen in forests around Antarda.¹⁸

In 1982, Ramgarh-Vishdhari was declared a wildlife sanctuary covering an area of 307 sq. km. According to Ladu Ram, a Forest Guard with special interest in tigers of this region, in 1983 there were three tigers between Ramgarh and Shikarburj Block, and in 1986 six individuals. In 1990, he believes there were 11 tigers in the entire area, spread over Bijolia, Bandra Pol, Mandu and Jharpeer- all of them in the Ramgarh Range. Even around 1993, a tigress with cubs was sighted at Phool Sagar while around 1996 a tiger was seen near the lake at Ramgarh.¹⁶

Decline of the Tiger and Other Wildlife:

Forests around Bundi started deteriorating around 1960s. Some of these include forests around Akhlot, Panidal, Kachhola, Umar, Pagan, Bansi and Dugari. Around the same time wildlife populations began to decline. By 1980s, chital were no longer to be found while sambar and four-horned antelope became very rare. Blackbuck which were common around Talwas, Lakheri and Kapren are now restricted to small areas around Nainwa.¹⁶

Poaching of tigers also started from the late 1950s. Between 1957 and 1967, nine tigers were shot by poachers in the forests of Bundi.²⁵

In 1985, a tiger was illegally killed at Loharpura Ghati.²¹ This was followed by another such incident in 1991 when another tiger was killed at Gordhan ki Pahadi in Pipaliya Manikchauth.^{20, 21} A suspect from the Meena community was caught and presented before the Magistrate.²⁰ Thereafter, while in the custody of the Forest Department, he was found dead.²⁰ This resulted in mass mob protests by the local people.²⁰ For over a year post the incident, no Forest Officer was allowed to enter the park.²⁰ In the absence of supervision and active management by the park authorities, protection of wildlife failed miserably.

In June 1997, a tiger was reported from Dablana, located around 30 kilometres from Bundi and 12 kilometres from Ramgarh-Vishdhari Wildlife Sanctuary.¹² When approached, he charged, mauling Forest Officer G.S. Bharadwaj.¹² The existing forest connectivity between Ramgarh-Vishdhari and

Ranthambhore, albeit weak, does allow for tigers to migrate through this traditional route. This route traverses past the forests of Talwas and Antarda, both in the northern parts of Bundi. Around 2007, a young transient male called Yuvraj, attempted moving in the direction of Bundi from Ranthambhore but was intercepted and poached.²² In August 2013, another young transient male, T-62 was camera trapped near Talwas. Speculation has it that the tiger stayed on in Ramgarh-Vishdhari Wildlife Sanctuary surviving mostly on livestock until early 2015, when it decided to travel back in the direction of Ranthambhore. While an occasional male tiger may still travel along this traditional route, the last female known from this area was only in 1975 when it was known to occupy forests of Antarda.¹⁸

Mining, deforestation and uncontrolled hunting can be identified as major causes for the decline of wildlife in this landscape. Commercial poaching has also been prevalent in this region. Even in the bygone era, a tiger skin fetched 100,000 rupees in this region.¹⁸

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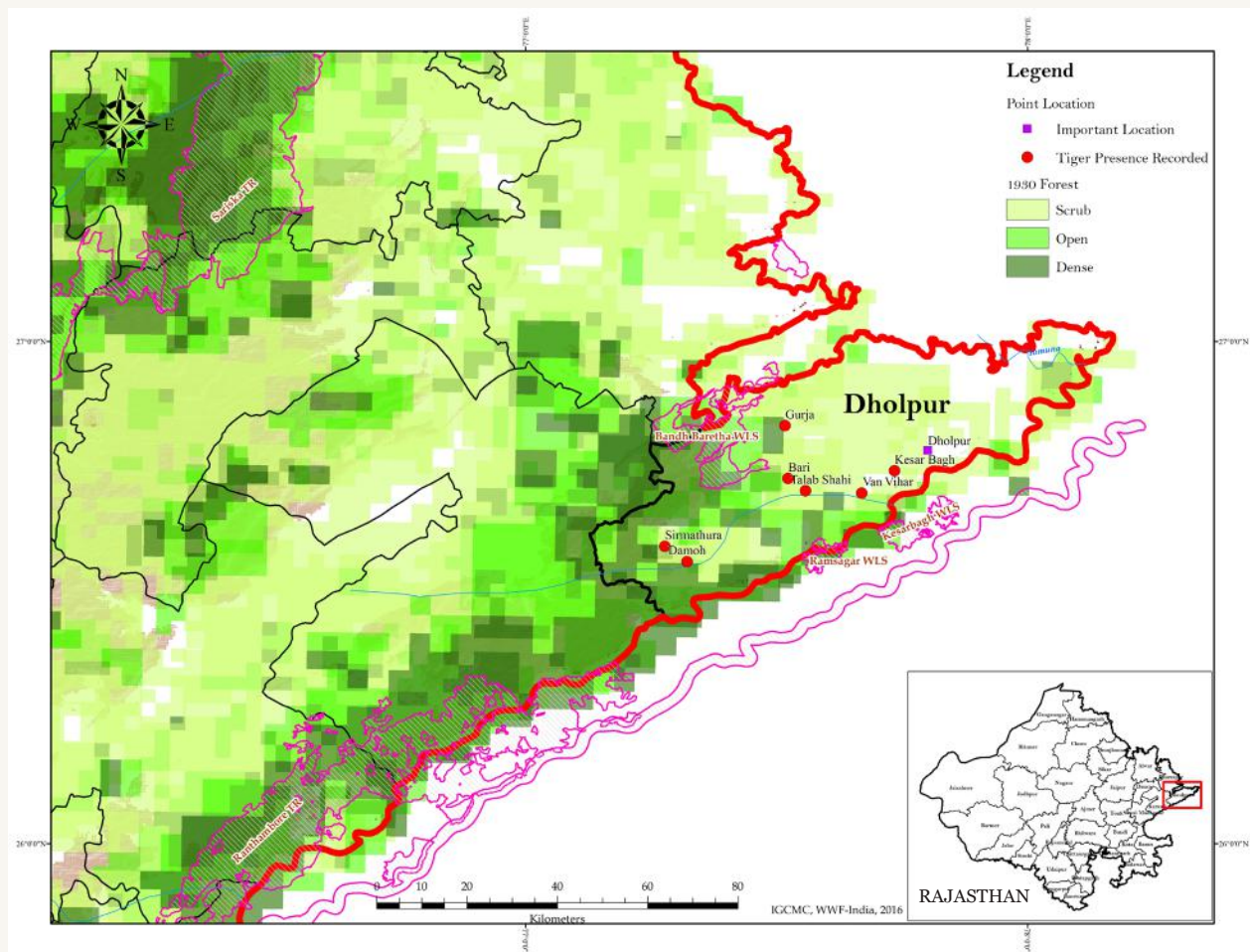
6. Dholpur

The erstwhile State of Dholpur was located in the north-eastern extremity of Rajasthan. To its north was present day Uttar Pradesh while to the east and south was present day Madhya Pradesh. On the western side was located the erstwhile State of Karauli. The total area covered by the State was approximately 3000 sq. km. Post merger of states, this region became Dholpur district.

In the south-south-western part of Dholpur district is a low chain of hills. These hills are known to yield high quality red sandstone and hence support stone quarries. Gurjar Pahar at 357 metres is the highest point in this range. On the eastern side of Dholpur, along River Chambal, the ravines plunge deep and create an undulating landscape called the Dang.

Forests, Habitat and Protection:

Located in the Yamuna Basin, most parts of Dholpur have rich, fertile alluvial silt suitable for agriculture. Furthermore, the region is drained by Rivers Chambal and Parvati. Hence, large areas are under cultivation. On the western side, mining for sandstone and limestone is commonly practiced. This leaves small pockets of forested areas in the region. However, in the past, Dholpur did support large forested



Map 6. A 1930 forest cover map of Dholpur District depicting locations with confirmed historical presence of tigers.

areas with tropical dry deciduous forest dominated by *Anogeissus pendula*. During his travels through this region, Babar mentions of the 'aabnoos' or *Diospyros melanoxylon* trees that he encountered around Bari near Dholpur. He mentions that most of these 'aabnoos' were white.⁶

Until 1960s, Dholpur had 63 sq. km. of forested area under mature *Anogeissus pendula* and around 80 sq. km. under *Boswellia serrata*.³ However, compared to its neighbouring Matsya States of Alwar, Karauli and Bharatpur, it had the smallest area under forest cover.

During the colonial period Dholpur had a Forest Department which managed forest related activities. However, forests were not commercially exploited and were used only to meet firewood requirements of the State and public and for shikar purpose.³ Grazing was generally permitted in most grasslands of the State. However, it was banned in the rundhs of Longspur, Gundraj, Kesarbag and Somnath.³ *Dalbergia shishoo* was a protected tree in the State and it was an offence to cut one.³

The ruler of Dholpur, Maharaj Rana Sir Udaibhan Singh (1911-1954) became an ardent conservationist towards the latter part of his life and was known to feed wild sambar, cheetal⁸ and even carnivores such as foxes and jackals with his own hands.³ He imposed strict restrictions on hunting not just in Dholpur but also in neighbouring areas such as Sarmathura.¹⁰

In 1948, once the Forest Departments of the Matsya States merged, forests of Dholpur were systematically managed until the 1970s.³

Wildlife:

The protected areas of Dholpur which included Van Vihar and Ram Sagar had large populations of chital, sambar and chinkara. Wild pigs were also strictly protected in the State.² Tigers and leopards were mostly restricted to the protected areas.¹ Sloth bear were found in the forested parts of the State until 1960s and so were wild dogs in the ravines of the Chambal.³

Mrs. Alan Gardner, a visitor to Dholpur in 1890s, mentions of the Dholpur Maharaja being a devoted hunter. She mentions of his unsuccessful ventures into the Dholpur countryside with English foxhounds as a young boy and then him taking to pig-sticking which got him many victories at various Tent Clubs.²

In 1955, Van Vihar and Ramsagar, erstwhile hunting preserves of the rulers of Dholpur, were notified as wildlife sanctuaries. Van Vihar covers an area of 25 sq. km. and is separated from Ramsagar by 18 kilometres which occupies an area of 34 sq. km.³ Both these sanctuaries located on the Vindhyan plateau, supported wildlife such as tigers, leopards and bear until the 1980s.

Distribution of the Tiger:

Dholpur was popular with dignitaries who wanted to shoot tigers. As early as 1890s, royal guests such as the Archduke of Austria were on the list of those invited to shoot tigers in Dholpur.² C.W. Waddington, Principal of Rajkumar College, Rajkot, who later joined political services of the ruler of Dholpur, in early 1930s mentions of as many as seven tigers being reported from around Dholpur in just a single day.⁷ Maharaj Sir Ganga Singh of Bikaner also visited Dholpur in early 1900s. On his initial two trips, he saw tigers at Kesarbagh and the surrounding hills.⁵

In March 1927, Maharaj Ganga Singh whilst sitting on a watchtower witnessed a tiger making a buffalo

kill at Kesarbag in broad daylight.⁵ Forests of Dholpur were strictly protected around this period. There were 15 tigers between the hills around Kesarbagh and the adjoining ravines of Chambal, during this period.⁵ Maharaj Ganga Singh also mentions of having witnessed a tigress with cubs trying to make a buffalo kill in Kesarbagh Hills and in Tabli-ka-Tal jungle.⁵ Over the next five days, in March 1927, not counting the individuals seen from the watchtower, reports of more than 10 tigers came from various parts of the small state.⁵ These included reports from Damoh, Rai Khoh, Gurja, Banas Rahi near Talab Shahi and Ramsagar Lake and included news of a tigress with cubs.⁵ Narbhada and Rijoni were other places known for tigers in Dholpur.¹¹

In June 1954, an anti-dacoit police patrol team shot down a tigress and her six month old cub at Van Vihar in self defence.⁴ Van Vihar continued to sustain its tiger population into the 1960s with four individuals in 1961, five in 1963 and two in 1966.³

In 1983, Ram Sagar Sanctuary had a pair of tigers of which the male once decided to travel along the River Paravati in the direction of Bari town.⁹ When he was spotted in a lemon orchard a few kilometres from Bari and a crowd gathered around and started disturbing him, he injured several people and returned to Ram Sagar.⁹ Shri K.K. Garg IFS, deputed in the region at the time recollects getting reports of the pair until 1986.

Decline of the Tiger and Other Wildlife:

The hunting preserves of Dholpur supported high populations of wildlife. Gardner mentions shooting four blackbuck and three nilgai in one such preserve in the 1890s.² She mentions that the preserve had 4000 or 5000 blackbuck at one time and the Maharaja shot 26 individuals in a few hours once.²

Although in reduced numbers, ungulates continued to survive in Van Vihar up to late 1960s when the sanctuary had around 500 chital.³ However, sambar, blackbuck and chinkara population had declined drastically. By 1966, there were around 150 chinkara, 40 blackbuck and 60 sambar left in Van Vihar.³ Shri K.K. Garg IFS who had seen large numbers of chital, sambar and chinkara at Van Vihar until 1986, was shocked to see only one lame female chital in the reserve on his return to the area in 2008.⁹

Wildlife across other parts of Dholpur also probably met the same fate. However, so far there exists no clarity on reasons for this sudden and drastic decline in ungulate populations in this area.

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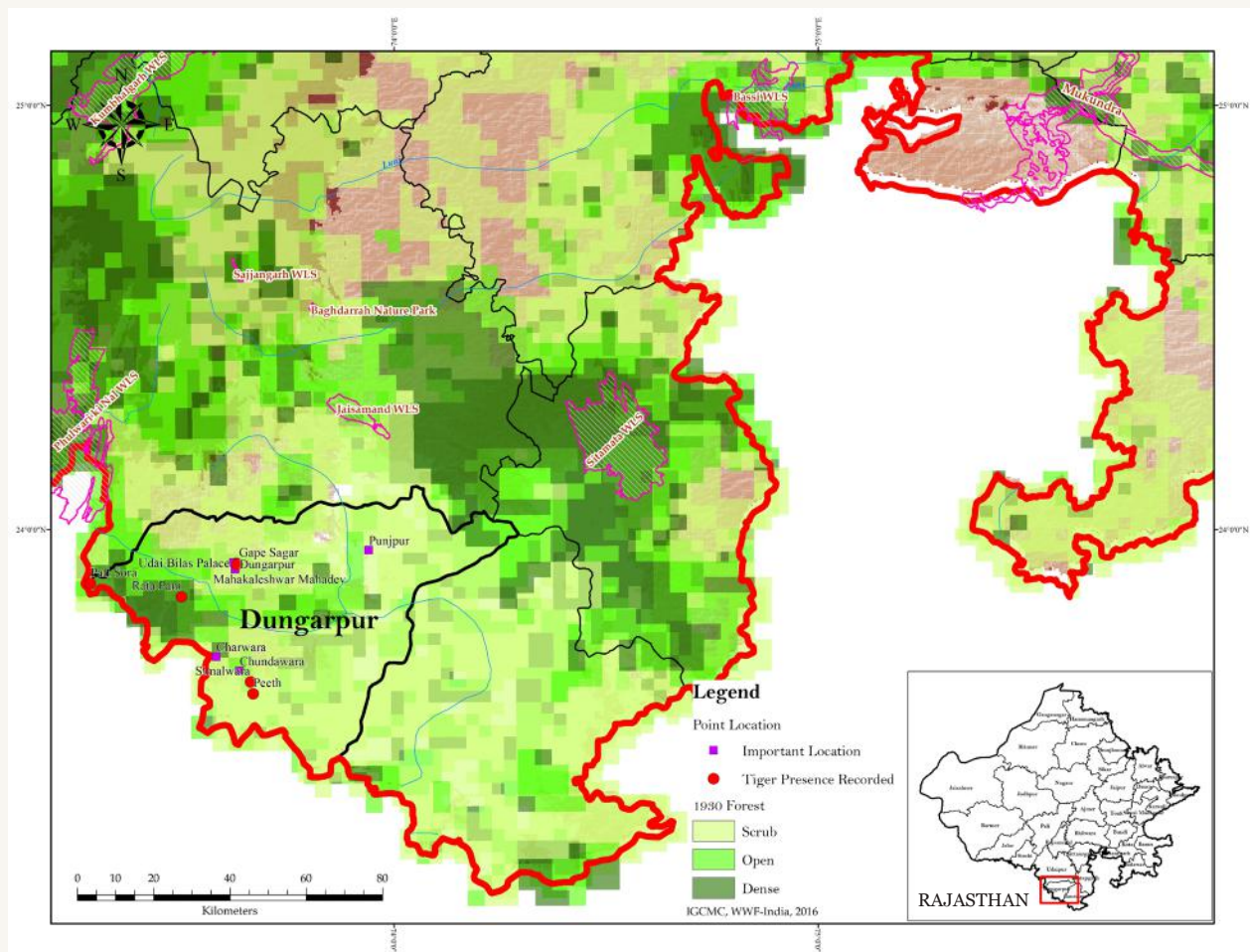
7. Dungarpur

Located in the Vagad region of southern Rajasthan, Dungarpur State had Udaipur to its north and northeast, Banswara to the east and states of Gujarat to the west and south. River Mahi separated it from Banswara while Som formed the northern boundary with Salumbar.

Northern parts of the State were hilly with Vijaygad Hill being amongst the highest at an elevation of about 450 metres. The south-western side of the State was relatively flat and sustained productive agriculture. The dominant tribe in the region was Bhil which practiced a form of shifting cultivation called 'walar.'³

Forests, Habitat and Protection:

Dungarpur was known for its extensive mixed forests, primarily on the northern hilly side, comprising chiefly of *Tectona grandis*, *Dalbergia* species, bamboo and fruiting trees such as *Mangifera indica*, *Syzygium cumini*, *Madhuca longifolia* and *Ziziphus* species.⁹ On the southern side, grasslands called 'beed' were found on an elevated plateau. River valleys had dense forests and banks of River Mahi were



Map 7. A 1930 forest cover map of Dungarpur District depicting locations with confirmed historical presence of tigers.

lined with *Vitex trifolia* which formed a cool canopy under which many animals took shelter during the hot summer, including tigers.³

Over 1000 sq. km. of the total geographical area of the State was designated reserved in 1909⁷ and continued to remain so until 1948.⁹ Forests were generally categorised as Class I, II and III forests with varying levels of protection. This included class I forests reserved for shikar only; class II and III from which forest produce and timber could be extracted although passes had to be obtained from the Forest Department for the purpose.⁷ Rotation based grazing was also permitted in Class II Reserved Forests.⁹ Class III forests were open to grazing.⁷

The Dungarpur State Forest Department was constituted in 1907 post the great famine of 1901.⁹ Discussions were held with the local public and thereafter areas identified and designated as reserved forests.⁹ This move was treated with resentment by the *Thikanedars* of Dungarpur, who opposed the move.⁴ They resented the ruler's decision that did not just deprive them of hunting wild animals but also meant loss of land to enhance area under the State Forest Department. The *Thikanedars* showed their disapproval of the move, which they believed was meant only to support the shikar interests of the ruler.⁴ However, the rulers permitted people living inside the forests to harvest forest produce for personal use.⁹ In 1941, a new State forest law called 'Kanoon Jungle Riyasat, Dungarpur' was constituted.

In Dungarpur, certain species of wildlife were strictly preserved with exclusionary hunting rights to the ruler. These included tiger, sloth bear, sambar, four-horned antelope, blackbuck, chital, caracal and the pangolin.

Grasslands called 'beed' existed mostly in the southern parts of the State and were managed by the Forest Department. Grazing in 'beed' was permitted on annual rotation basis. Local people were employed to harvest grass from 'beeds' and the harvest divided between those involved in harvesting and the Forest Department.⁹ Timber from the forests was also extracted using the coupe system and revenue was generated from forests.

Wildlife:

Documents related to wildlife were preserved meticulously by the State and regular wildlife counts conducted. All animals shot were also carefully recorded and notes made in special cases in customised shooting diaries. The 'Small Game Register' was used to record details of small game which included entries for categories such as species, sex, date, location, weapon and in case of birds, their length, spread, height and weight. The 'Big Game Record' contained similar details for larger mammalian species.

The famous famine of 1900-01 also called 'Chhapania' decimated much of the wildlife in this area.³ With desperate shortage of food and fodder, the Bhil population of Dungarpur took to surviving on nilgai, sambar and chinkara, populations of which plummeted severely⁷ and took almost a decade to recover. By 1928, the State had 200 sambar, 50 chital, 35 blackbuck, 150 four-horned antelope and over 800 nilgai. With plans to reintroduce tigers to Dungarpur around this time, serious efforts were made to augment the depleted prey base of the carnivore. Some initiatives in this direction included creating water holes, re-introducing chital and blackbuck and increasing the size of forested area under strict supervision.

Such initiatives appear to have had a positive effect on the wildlife population in Dungarpur which increased remarkably. By 1948 when Dungarpur State merged with the Indian union, it had 25 tigers,

200 leopards, 20 sloth bear, 2000 sambar, 500 chital, 200 four-horned antelope and 25000 wild pigs and chinkara each.⁷ Wolves and *dhole* were also present in the region³ despite a Rupees 25-bounty on *dhole*.⁴ Pangolin¹ and caracal were ‘exclusively preserved’ with their hunting rights restricted to the ruler.

Tanks across the State supported crocodiles.³ Some lakes such as Punjpur supported close to 1000 individuals while Chundawada, Gapesagar and others had hundreds of them.⁷ These same water bodies also played host to large numbers of migrating waterfowl each winter, of which snipe (*Gallinago* sp.) were very common and shot in large numbers.⁷

In pre-independent India, Dungarpur stood out for its populations of leopards and the large size of four-horned antelope, some of which even made it to the Rowland Ward.⁷ Between 1902 and 1918, Maharawal Sir Bijay Singh (1887-18), alone shot nothing less than 224 leopards in Dungarpur, while the total tally for leopards shot in the same region between 1901 and 1948 was estimated to be close to 7007. Leopards were sighted at unusual places such as the palace gardens and on the city compound wall.⁷ There were also reports of a black panther sighted along the border of Dungarpur and Idar State in Gujarat.⁷

Despite the large number of carnivores hunted in the region, incidents of carnivores turning man-eaters were generally rare with only two such leopards being reported between 1908 and early 1970s.

Distribution of the Tiger:

Dungarpur has an interesting history of management of the tiger. Until the late 1890s, forests of Dungarpur supported a tiger population on which not much information exists. In 1900-01, this part of India was struck by a severe famine which resulted in heavy losses to both humans and wildlife.³ With depleting wild prey, some tigers took to killing cattle and were perhaps destroyed while others migrated to other areas with not much information available on their fate.⁷ This resulted in a severe decline in the tiger population of the region with only five tigers reported between 1914 and 1918 which were restricted to the western side.⁷ Maharawal Sir Bijay Singh (1887-1918) made serious attempts at increasing this population. He provisioned the remaining individuals and ensured they were well protected. When their population increased to around six, he shot his first and last tiger in Dungarpur.⁷

In a sudden turn of events, in 1918, Maharawal Sir Bijay Singh passed away unexpectedly in a widespread epidemic of influenza. His eight year old son Maharawal Sir Lakshman Singh (1918-89) was a minor at that time and hence the State was placed under the services of a Political Agent, Donald Field. Being fond of hunting, Field and his friends dealt a final blow to the small tiger population of Dungarpur.⁷ By mid 1920s, Dungarpur had no tigers left in the wild.

Maharawal Lakshman Singh saddened by this loss, decided to re-introduce the species to Dungarpur. He sought the services of an agent in Central India that supplied animals to zoos and got a pair of tigers captured from forests of Gwalior and sent to Dungarpur.⁷ In 1928, these two individuals, a male and female, later christened ‘Bokha’ and ‘Bokhi’, reached Talod in Gujarat by train and then travelled to Dungarpur by road.¹⁰ Between 1928 and 1930, few more tigers from the forests of Gwalior were brought to Dungarpur to supplement the existing population and to create a viable population in the wild.¹⁰

In order to ensure protection of tigers, several schemes were implemented which included immediate compensation for cattle loss at a rate decided by the village heads for each cattle killed by tigers,⁷ creation of water holes to prevent tigers from straying away into other areas, regular census of prey species and a complete ban on hunting tigers.⁷ Even brothers of the ruler were strictly prohibited from hunting tigers.



Plate 3. Grave of Bokha, one of the first tigers to be reintroduced in the forests of Dungarpur

Some stories also oscillate around a novel strategy employed in Dungarpur around the same time to further increase the tiger population. This method involved tempting tigers from neighbouring princely State of Mewar using bait, although it is difficult to verify the authenticity of this story.⁵

Maharawal Laxman Singh in order to watch the tigers, would get bait tied at five different locations once a week and then would watch the tigers from a thatch hut blind erected close by.⁷ He knew all individuals by their unique stripe patterns and body shapes and had been privileged to see as many as seven grown up tigers on a single kill once.⁷ Some of these individuals in the wild were also filmed by the ruler from his hide.

The re-introduction was a success and by 1935 Dungarpur had 20 tigers.² By 1930, a tigress brought from Gwalior had bred producing a litter of three.⁶ Between 1930 and 1937, 45 cubs were born in Dungarpur to around six tigresses.⁶ 'Bokhi' bred three times between 1931 and 1936, producing 10 cubs in all.⁶ By early 1940s, tigers had re-colonized areas such as Ratapani, Parab, Adivat, Ghatkhana and Palisora.⁶ Rajdhani forest located in close proximity to the city and Ratanpur were popular tiger forests.¹²

By 1948 an average of 25 tigers were maintained in Dungarpur forests at all times.⁸ This was despite 25 tigers having been hunted post the success of the re-introduction.⁷ This figure includes individuals such as 'Bokha' which had to be killed in 1934 due to old age and loss of teeth.⁷ 'Bokha' today stands preserved in the Udai Bilas Palace at Dungarpur while his grave is located a few metres away in the forest adjoining the palace.

By 1950s, the tiger population of Dungarpur had once again started to decline rapidly and had reached the stage of extinction.

Decline of the Tiger and Other Wildlife:

Post the merger of states in 1948, Dungarpur's forests and wildlife faced severe persecution. Labourers from outside the erstwhile state were engaged to deforest areas⁹ that sustained over 100 year old trees.⁷ Some such areas included Vanjoi, Ratapani, Voreshwar, Kaduakhora, Bhim nu Paani, Venka Solanj, Mahakaal, Gadgeshwar, Naagthaan, Chanmata, Bedavali Chowki, Ghatervana, Vediganga, Saara nu Paani and Vasundhara Mata.⁸

All hills around Dungarpur were rapidly stripped barren and wildlife killed. By 1950, reports of tigers being poached started to come to light.⁷ By 1981, there were no tigers, sloth bear, hyenas, sambar, four-horned antelope or wild pig left in Dungarpur.⁸ There were around five chital and an equal number of nilgai left. Eight leopards had also declined to two or three individuals.⁸ Today even the last surviving chital has disappeared¹⁰ and a single sambar sighting was reported from Charwara-Rataghat area around seven years ago.¹¹

In 1993, a tiger strayed into the forests of Peeth-Simalwara.¹¹ Based on the description of the individual it most likely was a weak animal and may have been injured or wounded. He was immediately surrounded by a mob of people who killed it even before the Forest Department could reach the spot.¹¹ Such incidents are only a reminder of the declining tolerance of people for large carnivores combined with factor of fear, even in areas that once sustained such animals in high densities.

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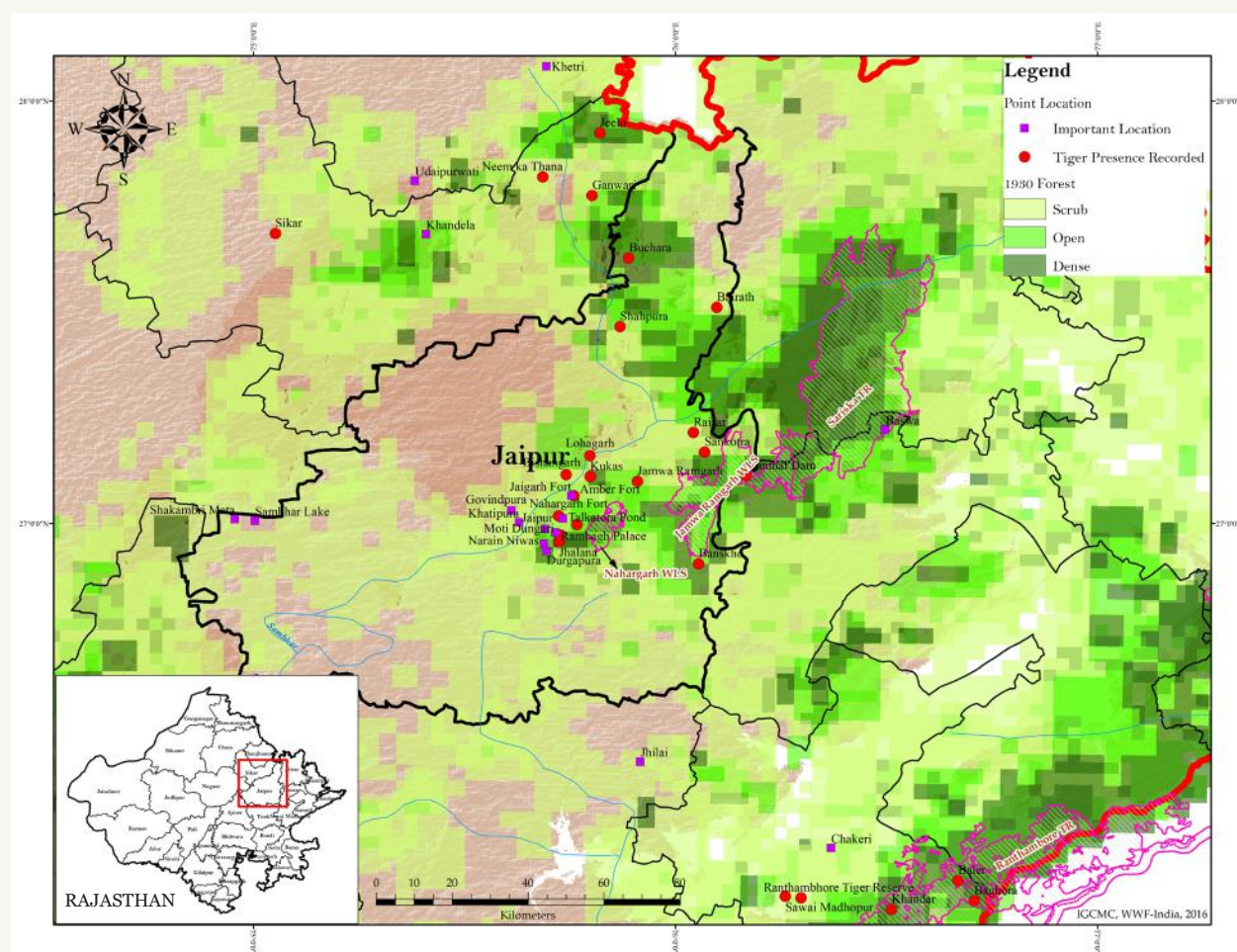
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8. Jaipur

The erstwhile State of Jaipur occupied the northern part of Rajasthan. It comprised of the present day districts of Jaipur, Sikar, Jhunjhunu, Dausa, Sawai Madhopur and part of Tonk. A range of hills running in a north-south direction separated it from the State of Alwar in the north. To the west, it was separated from the desert region of Shekhawati by a definite chain of Aravalli Hills running from Khetri in the north to Udaipurwati-Khandela region south-east of it. The same chain of hills continues further south although highly weakened and dissected until it reaches Lake Sambhar. To the south, near Bisalpur Reservoir, River Banas bisects a chain of hills and flows northward. The eastern part of Jaipur State was generally very hilly with elements of the Vindhyan Ranges around Sawai Madhopur.

The city of Jaipur, located almost in the centre of this erstwhile State, is bounded to the north and east by the Aravallis. These hills comprising of the forts of Nahargarh, Jaigarh and Amer descend gradually to the north, into the plains of River Banganga, and continue northward until they meet the border of erstwhile Alwar State.¹⁰



Map 8: A 1930 forest cover map of Jaipur District and surrounding areas depicting locations with confirmed historical presence of tigers.

Forests, Habitat and Protection:

To the northwest of Jaipur lies the arid and semi-arid region called Shekhawati. This region comprises of the districts of Sikar and Jhunjhunu. Remaining parts of the erstwhile Jaipur State form the Dhundhar region.

Most hills in the north and east of the erstwhile State contain species such as *Anogeissus pendula* and *Boswellia serrata*. Around river beds, species such as *Syzygium cumini*, *Tamarindus indica* and *Mangifera indica* can be found. *Euphorbia caducifolia* is common on most hills around the capital city. At least 14 species of grasses are found just around Jaipur city of which *Saccharum munja* is highly conspicuous across the landscape.

The best preserved forests of Jaipur were the shikar preserves and the royal grasslands called 'Raj beed'.⁹ In 1885 Mr. Mac Moir joined the services of the State as a Deputy Conservator. In 1886 he suggested reserves be classified into Class Reserve I, Class II and Class III, defined by varying degrees of grazing and other rights to the local people living around the areas.⁹ From 1900 to 1925, forests were placed under the control of the Shikarkhana Department and did not receive much attention.⁹ However post 1925, the Forest Department was revived and systematic management and commercial extraction of forests was initiated.⁹

In 1935, the forested area of Jaipur covered less than 800 sq. km.⁵ and the grass farm covered an area of 36,000 bighas (approximately 90 sq. km.).⁶ In years of acute grass shortage, parts of Khandar and Sawai Madhopur forest Range were opened to grazing for cattle from neighbouring areas. In the drought of 1929, 1248 cattle benefitted from such an arrangement.⁶

In 1939, the Jaipur Forest Act, framed under the guidance of H.S. George was put into action.⁹ Species such as the tiger, sloth bear, sambar and chital were restricted species and only the ruler had the privilege to hunt them. For most other species one could obtain a license and hunt.²⁶ In the mid 20th century, there were no restrictions on hunting tigresses and nor was there any seasonal ban on hunting the species.²² Summer was a popular time to shoot tigers since during this period several individuals could be found in small areas around the banks of the Chambal or nearby waterholes.²²

Wildlife:

The arid and semi-arid tracts of this region supported species such as blackbuck, chinkara and wild pigs. Areas in the vicinity of the capital city, such as Khatipura and Govindpura were grass preserves of the Maharaja and were known to host thousands of these ungulates.²⁸

Pig-sticking was a popular sport in and around Jaipur city. Every year, pig-sticking events would be conducted in September during the birthday week celebrations of Maharaja Sir Man Singh II (1922-1970). Sometimes, these events would be conducted at places such as the Ajmer Road which supported high densities of wild pigs.⁷ A European travelling to Jaipur in the late 1880s, mentions of grasslands about 12 kilometres from Jaipur where a major pig-sticking event would take place.³

Leopards were very common in all hill ranges. This includes all hillocks around Jaipur city, those in the north along the boundary with Alwar, in the hills between Khetri and Udaipurwati, around Sawai Madhopur and in areas neighbouring Shakambari Mata temple near Lake Sambhar. Around the second half of the 20th century, one leopard was shot in the basement of Rambagh Palace.¹⁹

Hyenas were common in the hills around Jaipur. Similarly, areas around Khatipura were known to have high jackal populations despite a 25 paisa bounty on them. *Dhole* albeit rare were sighted at the Sawai Madhopur preserve (part of present day Ranthambhore Tiger Reserve).¹⁸ Sloth bears were restricted to the preserve at Sawai Madhopur.²⁶

Apart from wildlife, Jaipur also had a tradition of holding animal fights for public entertainment. In a public arena, roosters, quails, ungulates, wild pigs, piglets and rams were often initiated into fights which would draw large crowds.¹¹ Sometimes, inter-species fights were also initiated. One such being when a tiger called Happy reared from a young age by Col. Kesri Singh was pitted against a leopard, a sloth bear and eventually against his litter-mate, Grumpy, who he killed.¹⁸ On their visit to India, the Prince and Princess of Wales chose not to attend one such exhibition which was on their itinerary.¹¹

Not just mammalian but also reptilian species such as crocodiles were reared and provisioned. At Talkatora Pond near Jai Niwas Garden was Badal Mahal, a hunting pavilion constructed in 1750. In early 1900s, this pond supported a large number of crocodiles[#] which were fed by the staff of the Maharaja.¹⁷

Distribution of the Tiger:

The erstwhile State of Jaipur was amongst the most progressive states in Rajasthan and was a popular travel destination for European royalty visiting India. One important entertainment activity on the itineraries for these high profile guests that included Emperors, Viceroy and others of similar stature was usually a tiger shoot.¹² In case of short-duration guests, Ramgarh near Jaipur was the venue for these hunts, while those with more time at hand were usually taken to the Reserve at Sawai Madhopur or what is today known as the Ranthambhore National Park. Col. Kesri Singh, the in-charge of the State Shikarkhana was usually responsible for making arrangements for these shoots. In his tenure as the Shikarkhana in-charge for the States of Gwalior and Jaipur, he was responsible for having got over 1000 tigers shot, mostly in the forests of these two states- in a period of around 40 years,¹⁸ implying around 25 individuals a year on an average.

The royal hunting preserve at Ramgarh was located around 25 kilometres from Jaipur city. It had a shooting lodge surrounded by hills and a lake created by damming River Banganga,² which today is being run as a luxury hotel. Below the lodge was a shooting box that had high powered electric lights fitted to assist in shooting tigers.² In 1982, 300 sq. km. of the area was declared protected and is today known as the Jamva-Ramgarh Wildlife Sanctuary. The hunting preserve at Ramgarh witnessed many tiger shoots and was well-equipped to host shoots for high profile guests which included the likes of Lord Wavell in 1946.⁸ Col Kesri Singh mentions that even though there really was no reason for tigers to stray out due to plenty of prey, some of the “worst incidents of man-eating in my recollection occurred in this apparently paradisiacal valley.”¹⁸ Until the late 1960s, tigers continued to be hunted at Ramgarh. In 1968, a family of six tigers was shot in this area, in most likelihood, the last of such shoots in the landscape around Jaipur.²⁶

Tigers were known to travel between Sariska in Alwar and Ramgarh, traversing areas around Raisar and Sankotra, both of which witnessed them until 1950s.¹⁸

Closer to the city of Jaipur, Kukas, Lohagarh, Amer and Nahargarh had tigers. Up to 1960s, tigers could be encountered on the road leading up to the fort at Amer. This was around the same time when Nahargarh and its surrounding hills including Amer were notified as a wildlife sanctuary encompassing an area of 52 sq. km. In 1970s, two tigers were shot around Kukas, indicating the species continued to survive in this region until recent times.²⁶

Areas such as Galta, Jhalana, Moti Dungari, Nala Garden,³² Laxman Dungari³² and Durgapura which today are a part of the bustling metropolis of Jaipur also supported tigers. In 1919, a tiger was shot in Durgapura.¹⁶ Even in 1940s, tigers were shot within the present day Jaipur city. In June 1941, a tiger was shot dead in the Nala Garden area and in April 1943 an individual in Laxman Dungri.³²

Jhalana was a popular tiger hunting area with eminent state guests such as the Prince of Wales who shot a tigress there in February 1876.¹⁵ This particular individual was fed on around 60 bullocks before the Prince's scheduled visit.¹⁵ In October 1919, Maharajkumar Sadul Singh shot his first tiger at Jhalana, four years after his father shot one in the same area.¹⁶ Maharani Gayatri Devi, amongst the few women known to have enjoyed the sport of hunting tigers also shot tigers at Jhalana. One of these included a female that she shot in 1952 which had five young cubs, two of which were later raised by Col. Kesri Singh.¹⁸

Areas around Jaipur supported several shooting boxes, some of which existed even in times of Sawai Maharaja Pratap Singh (1778-1803).¹ This area also saw many tigers taking to man-killing or becoming man-eaters.¹⁸ Thakur Balendu Singh mentions that his uncle shot three man-eaters in the vicinity of Jaipur²⁷ while Col. Kesri Singh shot around 30 tigers in the same area of which several were man-eaters.²⁶

Sawai Madhopur was the other area where state guests were taken to shoot tigers. This entire landscape supported tigers; from present day Ranthambhore National Park to the banks of River Chambal. Each year two hunting camps were held in this area - one at Sawai Madhopur and the other at Khandar.²⁶ These camps were elaborate affairs with much extravaganza. Luxury tents would be pitched to accommodate guests while massive 'haakas' were conducted across selected beats with large numbers of beaters and elephants.¹⁹ Some of the elephants used for the beats such as Sharifa and Bibiya were especially trained for the sport.¹⁸ Participants at these shoots included not just royalty from different parts of the world but also the Kings and Queens of England.

Northeast of Khandar, across River Banas is the small erstwhile principality of Baler. Located between Banas and the Chambal, Baler occupied an important area with respect to tigers. The area generally witnessed only transient tigers²³; however, areas around it were rich in tigers. Thakur Sher Singh, close to 100 years of age has shot over ten man-eaters, most of them around his village, in his lifetime.²³ He also witnessed around 50 tigers shot around his village.²² Around 1950, he and the Thakur of Jhilai drove out nine tigers in one day from the grass-laden banks of the Chambal at a place 12 kilometres from Baler called Baghora.²²

Villages such as Bhimpura and Maharajpura, both in present day Kailadevi Wildlife Sanctuary had tigers until the 1960s.²² So did villages such as Srinathpura and Vishwanathpura, located on the plateau like ridge in close proximity to Baler.²² Thakur Sher Singh saw his last tiger in Srinathpura in 1968. In recent times, only about a year ago an individual was reported from Fati Dant, in the same area.²²

To the south, Ranthambhore is connected with the Sawai Mansingh Wildlife Sanctuary. This region had breeding tigers until 1985-1986 when a tigress gave birth to three cubs in Pandya ki Tal near Bodal.²⁴ Unfortunately these cubs were killed by another male.²⁴ It took two decades before the area could be re-colonized by tigers. In 2009, T-36, a male cub was released in Sawai Mansingh Wildlife Sanctuary.³⁰ However, he was found dead in October 2010.³⁰ Today, this area supports around 13 resident tigers.²⁴

Further south of Sawai Mansingh Wildlife Sanctuary is the Kualji Forest Block. This area acts as a corridor for tigers moving between Sawai Madhopur and the forests of Kota-Bundi, via Indergarh-Lakheri-Talwas and Ramgarh. However, with a decline in tiger populations in the entire region, Kualji also was devoid of the species for several decades which have only in recent times re-colonized the area.

At present a single pair of tigers occupies the area²⁴ although migrating individuals such as the young tiger Yuvraj which was killed near Indergarh in 2007 have used this area in the past.

Other than around Jaipur and the Ranthambhore complex, tigers were also found along the extreme northern part of the erstwhile State around Neem ka Thana. Buchara was one popular place for hunting tigers in this zone and supported a resident population of the species.²⁶ Northwest of Buchara, records of tigers exist from areas such as Jeelo and Ganwari, while east of it, records exist from Bairath which shared connectivity with forests of Alwar.¹⁸ Similarly, tigers were also reported from Baswa in the southeast of Sariska.¹⁸ Around 1955-56, Thakur Rajbir Singh saw two tigers near Sainthal Dam in Bhangarh Area.³¹ It appears tigers were found in these areas until mid 20th century. Around the same period, they were also found in areas such as Shahpura and Bishangarh north of Jaipur.¹⁸

Banskho, located around 25 kilometres southeast of Ramgarh also reported tigers¹⁸ in the past indicating that until the 1950s, tigers were widespread across most of the erstwhile State of Jaipur. Even the semi-arid tracts of Sikar have reported an incident of a stray tiger passing through the area in 1976,²⁰ which was eventually shot dead by the then District Collector of Sikar.²⁹ Records of tigers also exist from Kot Sikarai, Khandela and Udaipurwati, all located in arid parts of the erstwhile State.³²

Decline of the Tiger and Other Wildlife:

Until 1947, tigers and other wildlife were widespread in the erstwhile State of Jaipur. In 1940s, the 'Prajā Mandal' accused the princely government for preserving tigers in the shikarkhanas. They believed these animals were preserved for pleasure and sport at a cost to the local public and called tigers a menace that resulted in 'scores of innocent people killed, maimed or disabled annually.'¹³ The State administration defended its stand by saying that tigers were being killed but the 'Prajā Mandal' was not satisfied with the response. It considered that the number of tigers killed was inadequate, given the number of people killed by tigers remained unchanged.¹³ In an environment such as this, no one ever imagined tiger populations to decline suddenly.

Until 1950s, tigers survived across much of the erstwhile Jaipur State. They were found in the north along the border with Alwar; to the west along the boundary with Karauli, in Sawai Madhopur and along the Chambal, in the south in areas such as Indergarh and in most hills around Jaipur city. These areas also had connectivity with forests of other states in Rajasthan such as Alwar to the north; Karauli-Dholpur in the northeast; Madhya Pradesh to the east and Kota-Bundi in the southeast.

While the population of tigers in Sawai Madhopur continues to survive uninterrupted, that in the north along the border with Alwar completely disappeared by 1950s. Not much information exists on when the last tigers in that landscape were hunted out, but we do know that the species was in the area until 1955-56.³¹

Closer to Jaipur, tigers survived into the 1960s. Several people report incidents of having sighted these individuals in Amer Ghati and Galta during the 1960s.²⁵ In Ramgarh, tigers with cubs were seen until December 1962.²⁵ The forests of Jhalana had a breeding population in the 1950s when a tigress with cubs chased members of a hunting party in an area close to the present day Laxmi Temple adjoining the Rajasthan University campus.²⁶ Around the same time, a popular tiger called Saabu Nath lived in the same area. People entering Jhalana forest would often see him sitting peacefully by a trail.²⁶

By 1969, there were only an estimated 12 tigers left in the forests of Sawai Madhopur and six in other parts of the erstwhile Jaipur State.³² The last known record of tigers being hunted in the area comes from Kukas in early 1970s.²⁶ Post this incident, no authenticated reports of tigers exist from Jaipur. Over a decade later, in 1988*, a tiger once again visited the hills of Jaipur.²⁸ Most likely, a transient from Sariska, this individual was reported from Nahargarh. A 'haaka' was once again conducted to drive the animal back to its original home in Sariska.²⁸ While the animal was reported to be moving back towards Sariska based on pug-marks located, there is no definite evidence of it having reached Sariska.²⁸

With a drastic decline in tigers, which started to become obvious by 1960s, some wildlife supportive lobbies started to condemn tiger hunting. In 1961 when the news of Queen Elizabeth II and Prince Philip's visit to Jaipur followed by a tiger hunt on the itinerary reached such groups, it was met with disdain. The Fauna Preservation Society of London, one such group, contacted E.P. Gee for his views on the matter.¹⁹ Gee's response was, "The tiger is not a protected species in India and shooting of the tiger by the royal party would be just the same as shooting a stag in Scotland and therefore it should not be frowned upon". At the same time, the newly formed Indian government was worried with the prospects of British royalty visiting the country and being hosted in an extravagant manner.¹⁹ Although, the Queen did manage to shoot two tigers,¹⁹ this was close to the end of royal hunts in India.

The decline of the tiger overlapped with decline of many other species. *Dhole* which were rare and only found in the forests of Sawai Madhopur were not seen after 1970.²⁶ Species such as leopards which were relatively common also started to decline. Until the second half of the 1960s, leopards were so common that one had made Moti Dungari his home and could be seen within the premises of the fort most times of the day. Worried by his presence, Maharani Gayatri Devi would sometimes request Col. Kesri Singh to drive the animal away, although discouraged the idea of shooting him.²⁶ Similarly, a leopard was known to visit Narain Niwas and sometimes take peafowl and dogs from the property.²⁶ Closer to Ranthambhore, Thakur Sher Singh says until 1950s, leopards could be shot from the roof of his house, although only one or two exist in the area today.²²

Blackbuck were common around Jaipur. The grass farm at Khatipura which post-independence was given away to the Army had large herds of them.²⁸ Today none exist in this area. Similarly areas such as Chakeri near Ranthambhore had large blackbuck herds.²² Chital were found not just in Ranthambhore but also along the banks of the Chambal along with sambar.²²

Between 1950 and 1970 most parts of this region saw immense lawlessness. This resulted in not just disappearance of most of the fauna but also that of the forest. Today, common species of wildlife such as nilgai and wild pig are reappearing, primarily in areas dominated by *Prosopis juliflora*, in which they seek shelter.²²

Notes:

*R.G. Soni in his article, 'Tiger Returns to Rajasthan: Report on Tiger Conservation Programme Three Years and Beyond' reports of a tigress with two cubs from Digota Block of Jamva Ramgarh Wildlife Sanctuary in December 1998.²⁰ I have been unable to determine if the year specified in this case has a typing error or if this was a separate incident from the one in 1988. In case of the latter, this undoubtedly can be considered the last known tiger from anywhere neighbouring Jaipur.

#In the original article, the author refers to these as 'alligators', which I believe must have been 'crocodiles'.

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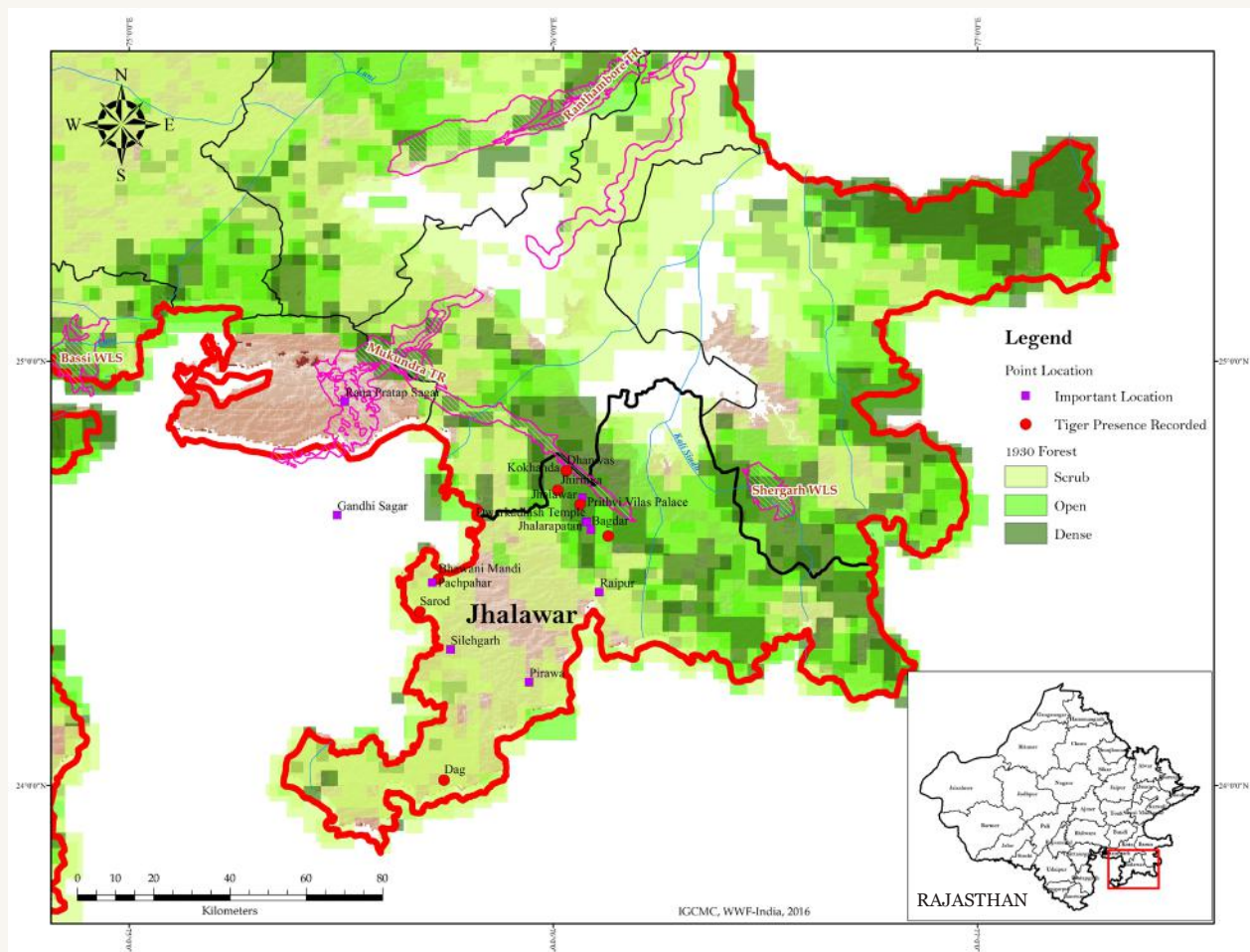
9. Jhalawar

The erstwhile State of Jhalawar was located in the south-eastern extremity of Rajasthan. To the north and northeast it was bounded by the erstwhile State of Kota. Rivers Kalisind and Ahu separated the two territories. To its east was Pirawa, belonging to the Tonk State while along its boundary on all other sides were princely states of present day Madhya Pradesh, separated from it in the southwest by River Chambal.

The entire state comprised of two detached parts covering an area of around 2000 sq. km.⁶ The smaller part was called Kirpapur and covered an area of around 36 sq. km., surrounded by Gwalior, Kota and Tonk States. Around 50 kilometres to the west of Kirpapur, across the River Kalisind, was located the remaining part of the State, with Jhalarapatan, the capital city in the north.

Forests, Habitat and Protection:

A low range of hills crossed Jhalawar State running in a northwest-southeast direction, passing by the city of Jhalarapatan. However, most of the area between Pachpahar in the west, Jhalarapatan in the north and Kalisind in the east was an undulating plain.⁵ The Mukundwara Range of hills traversed the State



Map 9. A 1930 forest cover map of Jhalawar District depicting locations with confirmed historical presence of tigers.

along its northern and eastern boundaries.

Southern half of Jhalawar was dominated by low hills of less than 500 metre elevation with strong characteristics of the Malwa Plateau.² The region also has numerous streams and rivulets, all of which joined the Kalisind, which empties into the Chambal.² During the dry summer, most streams and rivulets dried up leaving small zones with perennial pools of water called 'deh.'³

In the late 18th century, when Jhala Zalim Singh established Jhalawar, this region had dense forest cover.⁵ Generally the region has tropical dry deciduous forests with the dominant species being *Anogeissus pendula*, *Diospyros melanoxylon* and *Acacia catechu*.³ Thickets of *Carissa spinarum* were also very common and widespread until the 1950s.³ *Santalum album* also grew in a small part of the region.

Jhalawar State did not have a separate Forest Department.³ All activities concerning forests, fisheries, shikar arrangements, mining and customs were handled by a single department.³ However, forest guards were expected to regularly collect information on movement of species such as the tiger.⁷ Local people were permitted to extract subsistence level produce from the forest and also graze cattle. Only few areas such as Kokhanda-Dhanwas, Raipur-Balgarh and Silehgarh were closed to public and were the shikargahs of the rulers.³

Forest revenue was generated by the State although forests were not demarcated. The process of forest demarcation was initiated only post-independence.³

Wildlife:

Most parts of Jhalawar supported large populations of wildlife. Leopards and wild pigs were widely distributed and found commonly while sambar, nilgai and chital were found in limited numbers even in the early decades of the 19th century.⁶ Leopards were common even around Jhalarapatan and one was shot at Dungri Kothi, the old Circuit House of Jhalawar.⁷

Blackbuck and chinkara were found in the plains with the former being very common around Patan where they were strictly protected by the erstwhile rulers of the State.⁷ A famous Dwarkadheesh Temple in the region further discouraged wildlife from being hunted,⁷ although members of the ruling family did shoot around the area. Maharaj Rana Sir Rajendra Singh (1929-43) had once shot an albino blackbuck in the area.⁷ *Dhole* were also known to inhabit the area and so were hyenas, caracal, jackals and foxes.⁷

The ruling family of the State took special interest in birds. In 1890, the royal artist, Lala Jumna Das, was assigned to paint different bird species found in the State and two volumes of 'Birds of Jhalawar' were prepared under the guidance of Col. H.B. Abbot. Each plate of this rare work in possession of the erstwhile royal family contains name of the bird painted, its Latin name, Rajasthani name and special remarks.

Jhalawar also has an interesting rare memorial erected in the Gavdi ka Talab, behind Prithvi Vilas Palace to commemorate a well-targeted shot aimed at a bird sitting in the lake from a great distance by Maharaj Rana Sir Rajendra Singh.⁷

Distribution of the Tiger:

Tigers were found across almost all parts of the erstwhile State of Jhalawar and especially in areas very close to the present city of Jhalarapatan. Areas such as Kokhanda and Dhanwas, close to Jhalarapatan were known for tigers.⁴ In case of visiting guests, tiger hunting camps were usually arranged in this area.⁴ Jalil Khan was a famous shikari of the State who accompanied many of these guests on their tiger hunting expeditions through the forests of this area.¹ He would often compose couplets on his experiences of hunting.¹ Kokhanda and Dhanwas villages were re-located from the forest to ensure minimal disturbance to wildlife.³ Jhirniya located to the northwest of Jhalarapatan and Lotiya Jheel also supported high tiger numbers.⁷ In fact, these were the favourite tiger hunting grounds of Maharaj Rana Sir Rajendra Singh.⁷

South-east of Jhalarapatan was another area known for tigers near Bhanwarsa. In 1925 Maharaj Rana Sir Rajendra Singh shot three tigers in a single beat in this area located by River Kalisind.⁴ Ratadei in the north, located by Lake Mansarovar had thick forest on three sides and dense undergrowth of *C. spinarum*.⁵ This forest was also known for its tigers which were frequently hunted.⁵ Maharaj Mahijit Singh says even in late 1950s, tigers were visitors to the forest around Prithvi Vilas Palace in Jhalarapatan.

Dug in south and Bhawani Mandi in west, were also well-known for tigers.⁸ The rulers of Kota would hold a shikar camp at Dug every year during the princely rule.⁸

Decline of the Tiger and Other Wildlife:

Forests in this area faced severe assault which started in the 1950s. Around 1957, the last tiger was shot at Lotiya Jheel while in 1966 Maharaj Mahijit Singh saw his last tiger in this area at Bijlia Bhadak in Raipur-Balgarh Forest Block, a female with two cubs. Bijlia Bhadak used to have a permanent 'machaana' and was known for tigers.⁷ However, when a railway track was routed through the area, the 'machaana' was destroyed and so were the forests in most likelihood. Even in the 1960s, the Forest Department gave permissions to hunt up to one tiger each year in Khokanda, Dhanwas and Sarod Forest Block.³ As per a guesstimate by Sankhala, by the end of 1960s, the forests of Jhalawar supported around six tigers.⁹

In 1966, Jhalarapatan saw its last leopard which accidentally walked into town and got trapped inside a house.⁷ Although around this time, one could still get permission to shoot a leopard in Raipur, Balgarh and Sarod forest blocks, even this species was on a drastic decline.³ Chital and sambar were still found in areas with tigers and leopards along with Bhanwarsa and Bagdar Forest Block³ but they too were rare.

By 1980s, forests of Jhalawar had vanished completely. Other than a few areas such as Dug, most others were left barren. Several reasons ranging from the spurious role of politicians in supporting encroachment of forest land, deforestation, to overgrazing, and hunting have been cited as plausible causes for this vast scale destruction of forests and wildlife in this area.

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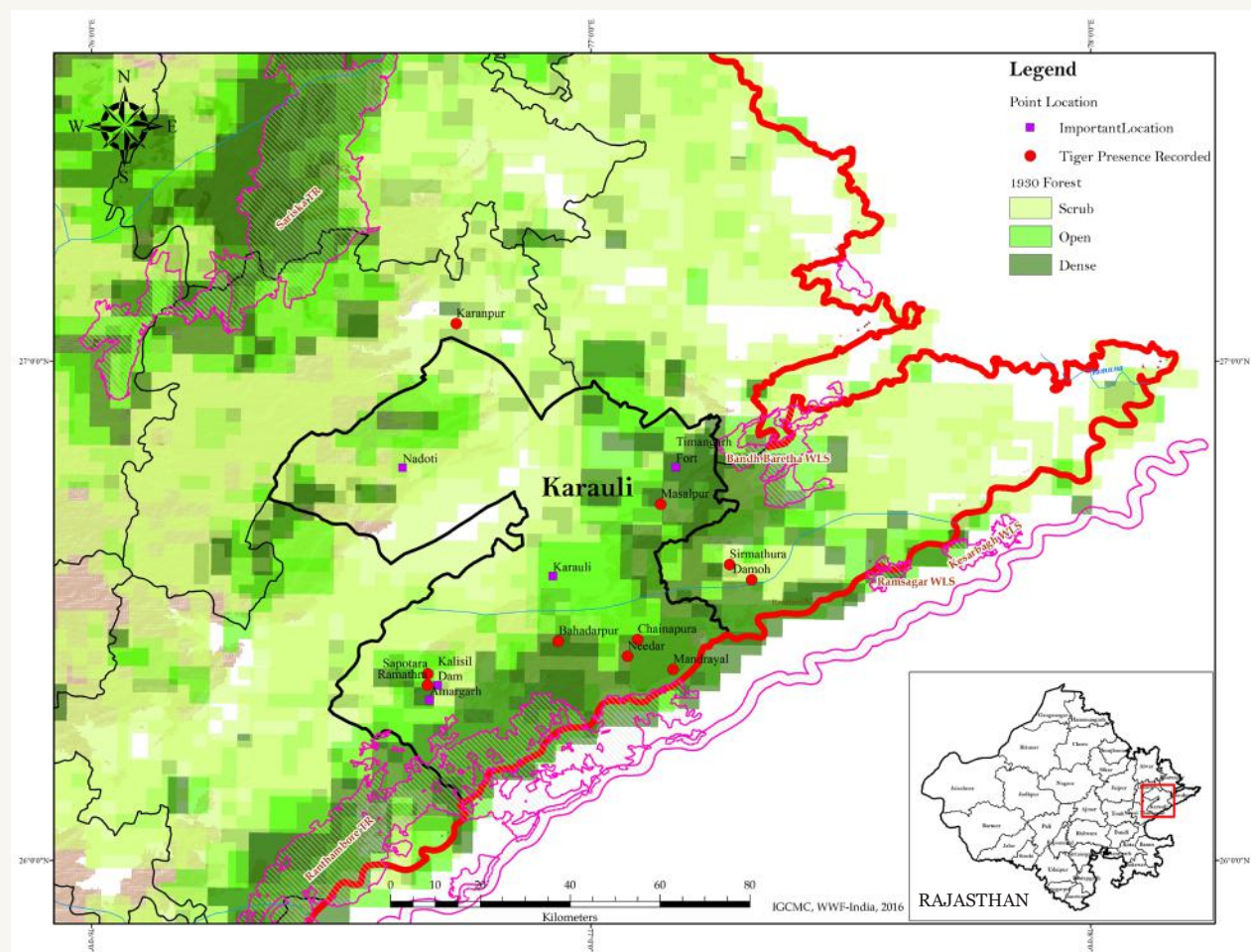
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10. Karauli

The erstwhile State of Karauli was located on the western bank of the River Chambal and was part of the Matsya States which included Alwar, Bharatpur, Dholpur and Karauli. Most parts of the State were dominated by low hills with a Vindhyan element, marked by a plateau like appearance and deep gorges formed by nallahs called *khohs*. Choria Ghata in Sapotra Range was the highest point in the region at 475 metres. On moving westward towards River Chambal, one encountered 5-8 kilometre wide stretches of ravines, at places 35-50 metres deep.³

Forests, Habitat and Protection:

Karauli State had the largest area under forest cover in all of Rajputana after Mewar.⁶ With a large population of the State belonging to the grazier Gujjar community, agriculture was not practiced widely in the State. Hence, two-thirds of the State covering around 2000 sq. km. was under forest cover or ravines.⁶ Furthermore, until late 1960s, Karauli supported 57% (640 sq. km.) of all mature *Anogeissus pendula* found in the Matsya States and 68% (222 sq. km.) of mature *Acacia catechu*.³ Shri Krishna Chandra Pal recollects the forest being within three kilometres of Karauli town.



Map 10. A 1930 forest cover map of Karauli District depicting locations with confirmed historical presence of tigers.

The State also had grasslands called 'beed' which provided grass to support the State cavalry. Productivity of these 'beeds' can be gauged by the approximately 1500 tonnes of grass that they provided annually.³ While sparse information exists on the decline of most such 'beed', one was submerged under the Kalisil Dam when the reservoir came up in 1956.⁸

Unlike most other states, Karauli did not have a separate Forest Department. Instead, a forest officer along with junior staff operated under the Revenue Department.³ Forests were neither demarcated nor commercially exploited.³ They were meant only to supply fuel and fodder and for hunting purpose.³ A grazing fee was levied on all cattle entering the forests and strict rules protected trees such as *D. sissoo* and *A.catechu*.³ Only post 1944, the State opened to commercial extraction of *A.catechu* and its export to other states.³

The ruler and his special guests had exclusive hunting rights. Even in case of a habitual cattle-lifter or man-eater, only the ruler could destroy the animal or designate someone to do so. Even *jagirdars*, who had control over forests under their administration, were prohibited from hunting such animals without the ruler's permission.⁸ Severe punishment existed for illegal hunting, wood cutting or grazing. For instance, anyone caught hunting wild pig was immediately imprisoned for three months.³⁶

Sarmathura to the north was more influenced by dictates from the northern State of Dholpur. Shri Narendra Singh mentions that Maharaj Rana Udaybhan Singh was a strict conservationist and had imposed a ban on hunting even in Sarmathura, which was beyond the boundaries of his administration. However, due to immense respect for the ruler, no one dared to disregard his orders.

Wildlife:

With vast forest cover, Karauli was rich in wildlife. Towards its southeast, forested areas existed around the famous temple of Kailadevi. This area was known for tigers, leopards, bear, sambar and wild pigs amongst other species and was contiguous with the forests of Jaipur State in the south and Gwalior to the east. Chinkara were also widespread in the region. Incidentally, the area had no four-horned antelope.⁶ Blackbuck were found around Maasalpur and Nadoti and are found near the latter even today.¹⁰

Around 40 kilometres north of Karauli is Timangarh Fort. This area had good forested habitat with connectivity to forests of Dholpur. Leopards were commonly sighted at the Timangarh Fort and wild pigs were common.¹⁰ Maasalpur had both, forests and grasslands; of which the latter supported a large blackbuck population.⁶

Distribution of the Tiger:

Forests of Karauli were known for tigers and are believed to have hosted more tigers than the neighbouring forests of Sawai Madhopur.⁸ Maharaja Sir Jiwajirao Scindia (1925-61) of neighbouring Gwalior did not hunt much and favoured preserving wildlife. Hence, during his regime, tigers grew in numbers in Gwalior territory and were sometimes seen crossing the Chambal and entering Karanpur area of Karauli.⁶ In 1954, Kailash Sankhala witnessed one such tiger crossing the Chambal from a fort at Utgir.⁴

Generally tigers and other wildlife would seek shelter in the many 'khohs', which had lower temperature than the surrounding areas and had dense vegetation cover. Furthermore, it was difficult to navigate such 'khohs' by vehicle and hence much hunting had to be done on foot.⁸

Traditionally, two shikar camps were held in Karauli. Winter camp was held at Maasalpur in the north while summer camp at Karanpur in present day Kailadevi Wildlife Sanctuary.⁶ These camps were meant primarily for the public to interact with the ruler and address their grievances before him. However, they were also used as opportunities to hunt.⁶ Another area, to the north with known tiger populations was around Damoh, around five kilometres from Sarmathura. Damoh played host to guests such as Lady and Lord Linlithgow who shot a tiger in the area on their visit.⁷

In his lifetime, Maharaja Ganesh Pal Deo (1947-1984) shot around 300 tigers, almost all of them in Karauli territory.⁶ On one such shoot, he encountered four tigers in one beat at Needar in Mandrayal area.⁶ Yuvraj Brijendra Pal Deo, his older son, shot at least one tiger almost each year in the forests of Karauli between 1939 and 1966.² Yuvraj Surendra Pal Deo, his younger son also shot around 70 tigers, most of them in Karauli.⁶ While Maasalpur, Badi Rundh and Chahra were the popular places for these shoots, the last entries in the shooting register of Yuvraj Brijendra Pal Deo mention of individuals shot at Bahadarpur Fort, Mandrayal and Chainapura.² Even today, reminiscences of tiger hunting are visible in forests of Karauli with its permanent machaans called 'maala'. One at Chahra is a classic example of such structures from top of which men would shoot while ladies watched from inside a well-sheltered space.

In 1940s, Thakur Dharamchand of Amargarh along with Col. Kesri Singh and few others started a shikar company.⁸ However, the few clients they got had to be taken to their property at Raghunathpur in Madhya Pradesh due to declining tiger population in Karauli. Eventually the company stopped its operations in 1960s.⁸ Around this time the King of Saudi Arabia visited Ramgarh near Sarmathura in pursuit of a tiger which was eventually shot by someone else on the team.⁷ Late Thakur of Ramathra along with some others also tried starting a shikar company and received around two clients.⁸

Although tiger hunting continued until 1960s, their numbers were on a drastic decline. Tiger sightings had become rare in the region and especially so towards the north where amongst the last tigers was sighted in the Gaddi area of Sarmathura in 1967.⁷ Eventually the species was restricted to the Kailadevi Wildlife Sanctuary which was declared a protected area in 1983 and covered an area of 673 sq. km. However, this too was a short-lived phenomenon. In 1991-92 a census was conducted in Kailadevi on special order from the Supreme Court. The census revealed evidence of 6-7 tigers but resulted in no direct sighting.⁹ By 2000 it was clear that the tiger had vanished from all parts of Karauli. In contemporary times only an occasional transient tiger may enter Kailadevi. However, these are rare events and short lived. In 2010, T-7 or Mohan traversed through the area, continuing its journey to Keoladeo-Ghana. In January 2013, T-26's cub entered the reserve from Ranthambhore via Gopaz Ghati and then continued to Kuno-Palpur Sanctuary after crossing the Chambal. More recently, in November 2014, T-71 was photo-captured in Kailadevi near Ghanteshwar ki Khoh.⁸

Decline of the Tiger and Other Wildlife

Until 1950s, each year 25-30 tigers were hunted in the Karauli territory and speculation is that territories of those individuals were replaced within 15-20 days by other tigers.⁶ Some of these individuals were hunted at the request of livestock owners or to reduce the tiger population as a culling operation. By 1970s, commercial poaching for tigers began in this area and dealt a severe blow to their already diminishing population.

Several reasons can be attributed to this diminishing population of tigers in Karauli. While Shri Narendra Singh claims that artillery practice at Damoh may be a cause of disturbance to wildlife near his village, Sarmathura; Shri Krishna Chander Pal Deo thinks it is lack of enforcement by the Forest Department,

uncontrolled grazing and deforestation which is the cause for decline in wildlife across the erstwhile State.

Cases of poisoning of carnivores have also been reported from the area. For instance, in May-June 2010, a tigress with cubs was poisoned to death in the Talawara region along the boundary of Ranthambhore and Kailadevi.⁹

Hunting by the Rapid Action Force, deployed to control dacoity in the region along with other forest dwelling communities dependent on bush-meat have also been identified as causes for decline in populations of sambar and chital in the Kailadevi region.⁶ These species have suffered a great decline in their populations since last three decades with almost no large natural prey other than nilgai left for tigers. Blackbuck which were commonly sighted around Maasalpur went extinct in 1949-50 at the time of merger of states, while chinkara which had a widespread distribution throughout the State are now restricted to Kailadevi.⁶ The only species that seems to have made a comeback in the Kailadevi region is wolves.⁶

While one would expect the burgeoning population of tigers in Ranthambhore to re-colonize the empty forests of Kailadevi, several hurdles come in the way. These include:

- a. A gap of over two kilometres between Ranthambhore and Kailadevi with 23 villages located in it and presence of commercial activities such as mining and infrastructural development.⁵
- b. Excessive grazing within Kailadevi Wildlife Sanctuary.⁶
- c. Presence of 82 villages inside the protected area with most families dependent on livestock for livelihood.⁵
- d. Presence of 77 villages in close proximity to the periphery of Kailadevi Wildlife Sanctuary.⁵

Unless a well-formulated relocation programme is implemented in Kailadevi Wildlife Sanctuary, and a strict control implemented on the unregulated mining and infrastructural activities, the future of the tiger in this landscape seems bleak.

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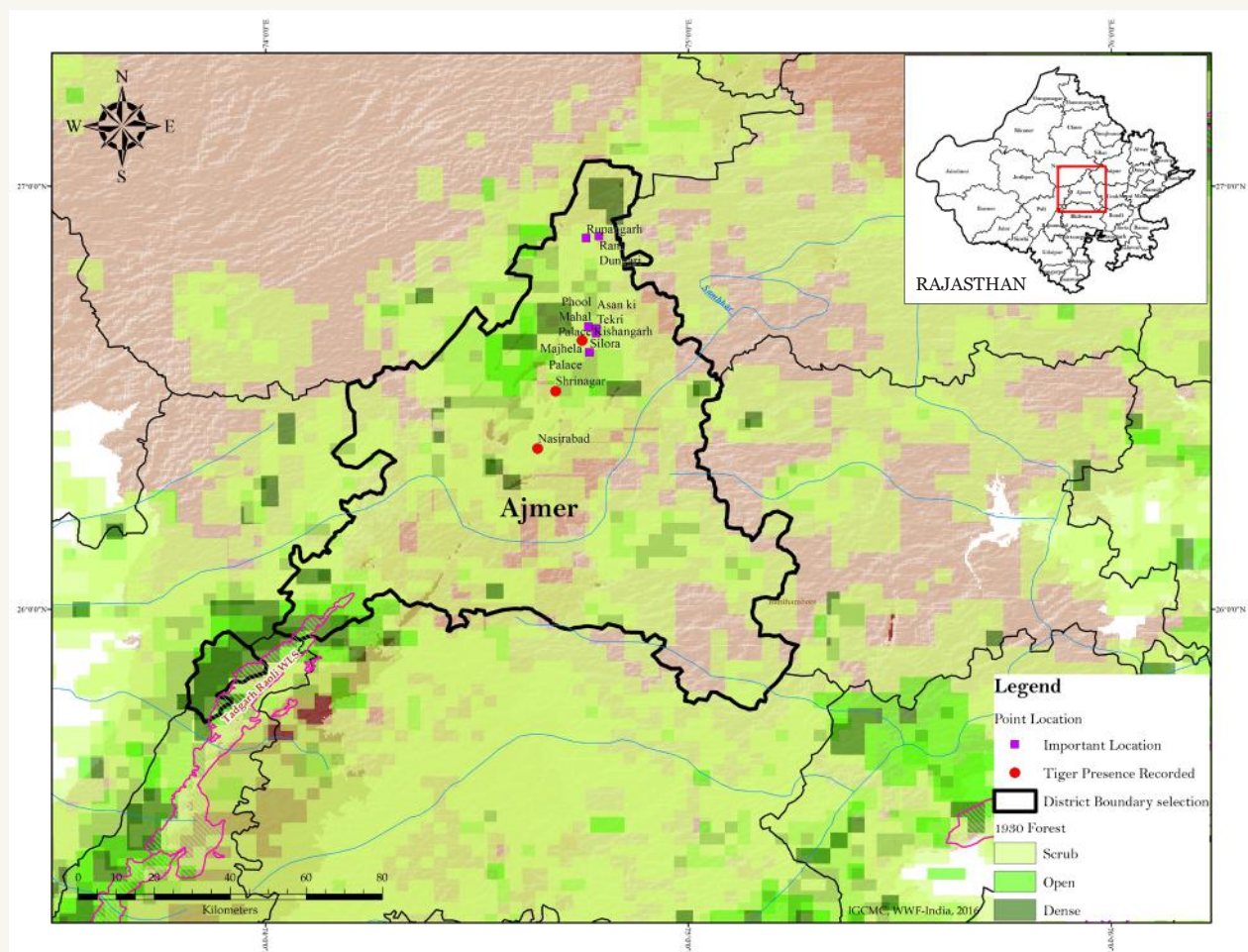
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11. Kishangarh

Located in Ajmer district, about 30 kilometres north of the district headquarter is the marble town of Kishangarh. The town is best known for its unique painting style which gave birth to the famous courtesan, Bani Thani- a tourism mascot for Rajasthan today. The school of art emerged around 18th century and came into prominence under the patronage of Maharaja Sanwant Singh (1748-57). The entire princely State of Kishangarh covered an area of about 2200 sq. km.⁵ A weak chain of hills runs from Kishangarh town to Naseerabad in the south via Srinagar.

Wildlife:

The total protected area of the State was 106 sq. km. although a large proportion of it was dominated by scrub and grassland vegetation.¹ The north and central parts of the State supported blackbuck, chinkara, wild pig and nilgai while leopards, hyenas and occasional wolves were to be encountered in the hills.¹ Sambar were also found in the hills.¹



Map 11. A 1930 forest cover map of Ajmer District and Kishangarh Region depicting locations with confirmed historical presence of tigers.

Pig-sticking:

Following the style of this landscape, Kishangarh also protected wild pigs for pig-sticking. Shooting a pig without a license was a serious offence and could result in imprisonment for up to six months.⁵ Shri Brajraj Singh points out to a road across from the tank adjoining Phool Mahal Palace and says, “My grandfather had a private reserve there, at Asan-ki-Tekri. Sometimes in the evenings one had to wait for up to 15 minutes when pigs crossed the road”.

Maharaja Yagyanarayan Singh (1926-39) preferred pig-sticking over shooting and hence the wild pig preserves were well protected for pig-sticking, Rani Dungari and Roopangarh being amongst the favourites for the sport.⁵

In 1895, Naseerabad Hunt, a Tent Club, comprising of British soldiers stationed at Naseerabad interested in pig-sticking attempted getting permission to visit Silora in Kishangarh State.² However, the permission never came through. Pig-sticking was not only a sporting activity but was also used as a means to please high ranking British officers and to seek favours during their visits to a state for the sporting activity.²

Distribution of the Tiger:

Tigers would enter Kishangarh through the hills of Naseerabad and Srinagar. They would then arrive at the Majhela forest area which even today has the old shooting lodge of the erstwhile ruler of Kishangarh. Majhela Forest covered a total area of five sq. km. and was dominated by *Anogeissus pendula*, *Acacia nilotica* and *Euphorbia caducifolia*.⁵ It supported high populations of wild pigs and sambar.⁵ In 1952, Maharaja Sumer Singh (1939-71) made an effort to introduce cheetal into the Majhela Forest but they were all poached despite requests to the DFO Jaipur Division, Government of Rajasthan, to issue an order prohibiting shooting cheetal in Kishangarh State.^{3, 4}

In 1931, there was one tigress with four cubs at Majhela. Thereafter, in 1945 a family of tigers was shot dead in Kishangarh which apparently came from Jahazpur area near Deoli, a distance of around 150 kilometres.⁶ However, there could be a mistake with these dates and the family of tigers reported from 1931 may indeed be the same as that reported in 1945. The last tiger to be shot in this area was however, several years later in 1955.⁵

Decline of Wildlife:

According to Shri Brajraj Singh, in 1949, Majhela alone had 700 wild pigs. They were enumerated using a beat count method. By 1956, not a single one survived. Similarly the 5000 or more blackbuck disappeared around the same period.⁵ The last sambar and hyena were spotted in this area about 20 years ago while Shri Brajraj Singh saw a leopard in 1969 near Majhela. In most parts of the region, *Prosopis juliflora* has replaced *Anogeissus pendula* and *Acacia nilotica* forest. While this forest may not be good for species such as the leopard, it supports small game and nilgai. In the last decade, leopards seem to be returning to the landscape with reports of conflict from areas such as Naseerabad and Beawar.⁵

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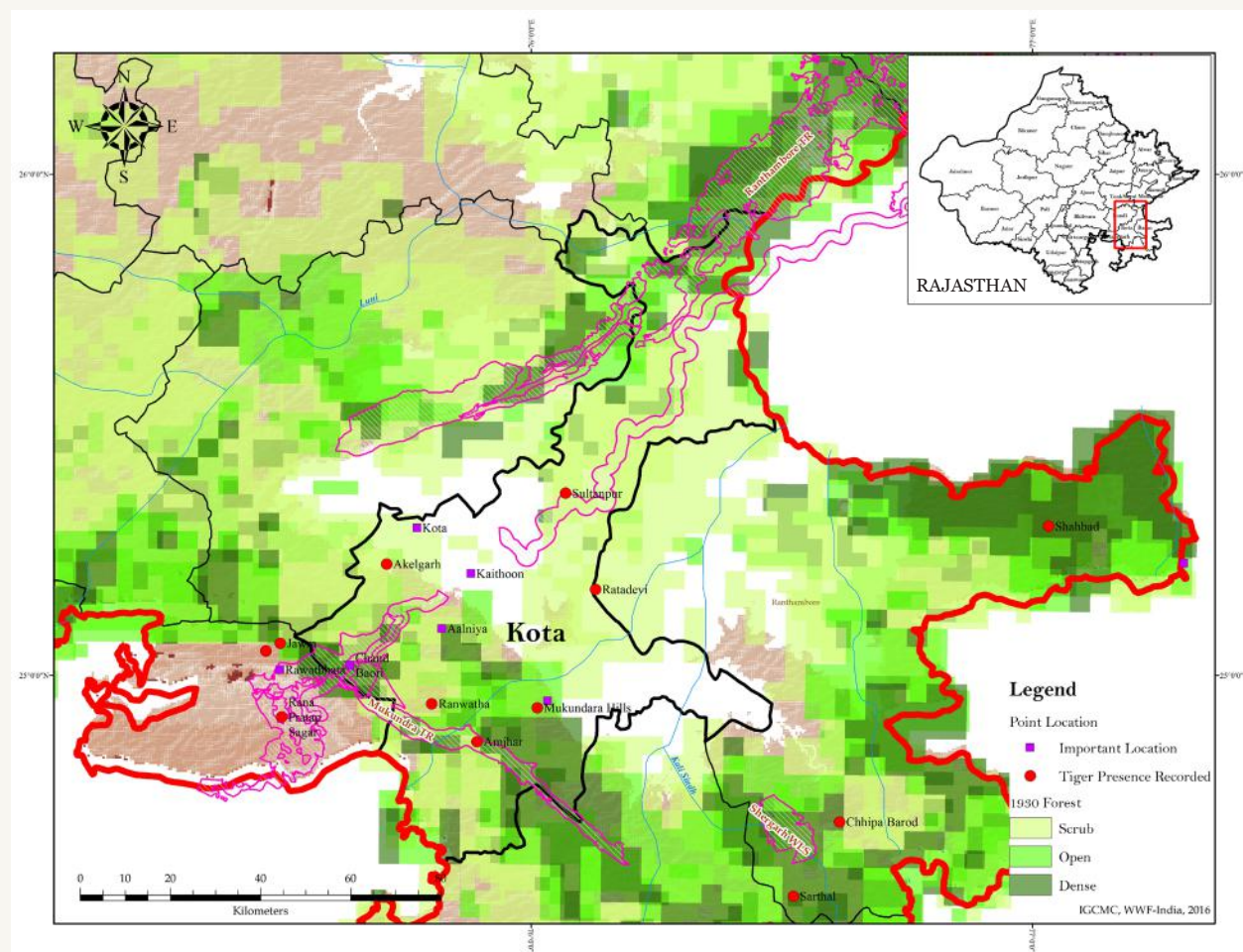
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12. Kota

The erstwhile State of Kota was surrounded by Bundi, Jaipur, Mewar, Jhalawar, Tonk and principalities of erstwhile Madhya Pradesh. Post merger of the State with the Indian union, Kota got divided into present day districts of Kota, Baran and Jhalawar.

Kota is a well-drained part of Rajasthan with five important rivers flowing through its territory- Chambal, Kalisind, Parvati, Parwan and Kuno. Of these, Chambal formed the State boundary with Bundi and Jaipur while Kalisind separated it from states to the south. All these rivers form deep gorges and ravines, particularly Chambal and Kalisind.

The Mukundara Hills located in the southern part of this region are an important geological feature. This range starts near the town of Rawatbhata,⁹ from where it traverses in a south-eastern direction until it reaches River Parwan. The entire range runs as two narrowly spaced ridges,⁷ attaining its highest elevation of 517 metres around Chand Baori.⁹



Map 12. A 1930 forest cover map of Kota District depicting locations with confirmed historical presence of tigers.

Between Rivers Parwan and Parwati in the east, is an area scattered with irregular hills and the Pathar region.¹⁴ This region has several small rivers flowing through it such as the Sukhar, Andheri, Lahsi, Borni and others.¹⁴ Some important forests of the erstwhile State of Kota, such as those around Shergarh range were located in this zone.

Along the eastern extremity of erstwhile Kota State, along the boundary of Madhya Pradesh is Shahbad. To the east of Shahbad at an elevation of 549 metres is the highest point of the region called Mamuni.⁵ Forests of Shahbad even today form a continuum with those of Kuno-Palpur Wildlife Sanctuary in Madhya Pradesh.

Forests:

Covering an extensive area with varying topographical features and hence soil types, Kota State had diverse forest types with tropical dry deciduous forest being the most widespread. This area supported one the largest continuous forests in all of Rajputana, covering an area of around 3600 sq. km. in early part of 1900s.⁷ Forests dominated by *Anogeissus pendula* were most extensive, usually found in areas with rocky surface. Other species found in similar habitat included *A. pendula*, *Diospyros melanoxylon*, *Butea monosperma*, *Bauhinia racemosa* and *Lannea coromandelica*.

In areas with higher moisture levels, such as river valleys, species such as *Madhuca longifolia*, *Buchanania lanzan*, *Albizia lebbek*, *Dalbergia latifolia*, *Terminalia bellerica*, *Mitragyna parvifolia* were common. *Dendrocalamus strictus* was also found in these areas especially in some areas such as Naharia of Chippabarod, Bhensaghat of Shahbad, Kunjiswas of Kishangarh, Teakli of Shergarh,¹⁴ Darrah Hills and along the slopes of River Chambal.⁹

The ravines of Chambal, Kalisind and Parwan were almost devoid of trees. The few that existed were scattered and comprised primarily of *Salvadora* sp., *Prosopis cineraria* and *Acacia* species.⁹ Teak was also fairly widespread across the region while the valuable *Santalum album* was found in Nagrakheri of Kanwas Range until the 1960s.⁹

Areas with rocky surface were usually devoid of trees but did have grass cover with species such as *Aristida depressa*, *Themeda* sp. and *Apluda mutica*.⁹

Wildlife:

Until the early 1950s, large parts of this former state were under forest cover and strict preservation. This allowed for a wide diversity of species to exist which included large carnivores such as tigers, leopards, sloth bears, hyenas and wolves. Common prey for large carnivores such as sambar, chital, nilgai and wild pigs were found in most forest blocks. Borban was particularly rich in chital with sometimes as many as 500 of them at one place.¹² Blackbuck and wild pigs were common around Kota and the latter were provisioned in several parts of the State.¹⁶

Lions and cheetah feature in many miniature paintings of Kota that reflect existence of the species in the State. On basis of paintings, Kota had lions until the 18th century. A painting by Joshi Hathuwa in 1784 depicts Maharao Umaid Singh I (1771-1819) hunting lions in the jungles of Alnia.³ In May 1937, Maharao Bhim Singh II (1940-1991) shot a lion at Jaronia in Shahbad, which apparently was one of the African lions reared and introduced into the Gwalior territory by Maharaja Madho Rao II Scindia (1886-1925) that had strayed away.³ Cheetahs on the other hand were usually used for coursing antelope and were almost always imported from Africa.

Dhole was another species, known from jungles of Kota. The species was seen in these forests until 1920, when Maharaja Ganga Singh sighted one at Borbon.¹² Although, it certainly must have been rare even then, for the ruler made a note of it in his diary. Until 1870s, the State gave bounties for hunting tigers, leopards, wolves and sloth bear.⁶

Wildlife and Forest Laws:

Until the late 1880s, State forests were managed by a department, called 'Dungar ki Kutcheri' with two primary objectives: cutting of wood and application and collection of cess on grazing.⁸ The revenue generated from forests in 1890 was 34,736 rupees.⁸ During the reign of Maharao Sir Umaid Singh II (1889-1940) much effort was spent on increasing revenue from the forests.⁸ Between 1902 and 1904 based on suggestions from Shri Sundar Das, extraction of katha was started.¹⁴ This period also overlapped with the afforestation schemes being implemented in several areas which included 70,000 plants of bamboo being grown along the Parvati in 1911-12.⁸ By 1940s, the State was earning 200,000 rupees annually from its forests.⁸

The State forests were categorised into:

- a. Kathore Jungle- these could be used by the local people to meet their requirements for fuel-wood and other forest materials. However, they had to pay for the produce collected which was not the same for all villagers. Also, species of trees declared 'Mamnua' could be extracted only after obtaining special permits.¹⁴
- b. Shikar preserves or Hankas- these were under the control of the Shikarkhana Department and were strictly protected.¹⁴ By early 1920s these forests had been demarcated and settled based on the Kayda Hadbandi Jungle of 1915. These forests were exclusively preserved for the ruler and his special guests. Apart from other duties, Shikarkhana Department was also responsible for making arrangements for all shoots, provisioning/baiting wildlife wherever required and handling tanning and colouring of skins of animals' shot.¹
- c. Parat or unoccupied lands- In 'maidani' administrative units such as Chhipabarod and Shergarh; and in 'jungli' areas where forests were extensive such as Kishanganj and Shahbad, such 'parat' lands came under the purview of the Forest Department.¹⁴
- d. Other categories included grasslands or 'birs', 'radis', 'jagir' forests, 'zamindari' forests and grazing lands.^{9, 14}

While forest rules were strict, based on circumstances at a given time, the State administration had the liberty to make exceptions to existing rules. For instance, in 1921 due to excessive crop raiding by wild ungulates permits were granted to farmers to shoot animals with the exception of tiger, leopard, sloth bear, sambar and chital; the latter two due to their importance as shikar animals.¹ However, further modifications were made to the rule, when wildlife started diminishing due to excessive hunting. Some of these included a complete ban on hunting crop raiders in forested areas, at water holes and in area between Darrah Hills and along the Amjhar.¹

In 1946, the Kota State Forest Act was implemented. Some of the highlights of the Act were; permission to arrest a suspect of forest offence without a warrant. Such suspects could also be imprisoned for up to one month. In case anyone was found hunting, fishing or trapping animals illegally, punishment could be as severe as imprisonment up to six months or fine up to rupees five hundred or both combined.²

Distribution of the Tiger:

Tigers occupied most forests of Kota until early 1950s. The species was also frequently hunted, evidence of which exists from as early as the reign of Maharao Durjan Sal (1723-1756). A painting exhibited at the Garh Palace in Kota depicts a scene of tiger hunting with Maharao Durjan Sal shooting from a machaan. The ruler can be seen aiming at one of the three tigers in a net stockade while his accomplice aims at one of the other two tigers outside of the stockade. Accounts exist of Maharao Durjan Sal's passion for hunting tigers and his preparations for hunting resembling those of 'preparations for war.'¹⁶ During his reign, Kota was already seeing areas being earmarked for protection called 'ramnas'. During his reign several shooting boxes were erected across tiger forests of the region.¹⁶

Another painting at the Garh Palace depicts Maharao Umaid Singh I aiming at a tiger from elephant back. Next painting of Maharao Ram Singh II (1828-1866) shows him hunting from a shooting box unlike his predecessors, while a *hanka* party drives a tiger into a stockade along with several other animals. Another painting of the same ruler depicts a tiger feeding on buffalo bait by the River Chambal, while he aims at the animal from his boat.

Looking at paintings of hunting scenes from Kota, a relationship can be established between paintings of rulers that hunted and the length of their tenures. Going by paintings available in the public domain which includes those in government museums at Kota and others visible on the internet, it appears a combination of hunting and art was a privilege restricted to rulers with longer tenures.

A painting of Maharao Shatru Sal II (1866-1889) at the Metropolitan Museum of Art, New York, shows the ruler hunting a tiger from an elephant back using bow and arrow while his accomplice mahout inserts a spear into the prey. This appears to be an anomaly considering rulers preceding Maharao Shatru Sal II were generally depicted hunting with muskets indicating availability of the weapon during that period. However, this may be an indication of the ruler enjoying hunting his dangerous quarry with primitive weapons in order to give the animal a fair chance.

During the reign of Maharao Umaid Singh II much changed in Kota. With the end of active warfare, much attention could be paid to welfare and developmental initiatives in the State. As mentioned above (see Wildlife and Forest Laws) the Forest Department underwent modifications and hunting preserves were strictly protected. The ruler enjoyed shooting and not just did he shoot animals but also participated in target shooting.⁸ There were 150 shikargahs in Kota during his reign and he would shoot four or five tigers each year.⁸ A 1908 article in the Mayo College magazine wrote of his skills at hunting tigers where it mentioned of how he shot six tigers in three continuous days of shooting in the forests of Kota and Jhalawar.⁸ Thakur Chagga Singh Bania, engaged in the services of the shikarkhana during the same period was instrumental in getting around 2000 tigers shot during 63 years of his service.⁸ However, the ruler also had other hobbies. In places such as Bhainsrorgarh he would spend three days at a stretch not hunting any animal but just observing them.¹⁷ In 1907 he got a dark room constructed at his palace and indulged in photography.⁸

Dense forest and several rivers traversing this part of Rajasthan made for an ideal habitat for the tiger. The islands formed on some of the rivers were frequently used by tigers especially to beat the summer heat.¹⁵

Some of the places where tigers were hunted during this period include:

- a. Around Kota - Jagpura Bagh around 15 km from Kota on Jhalarapatan road, Umaidganj, Alania
- b. On Chambal - Bhanwar Kho, Akelgarh

- c. By River Parwan in Shergarh- Bhanwar Karar, Naria beat
- d. Between Kalisind and Chambal around Sultanpur
- e. Darrah - Ranwatha, Amjhar, Kesariya Paj, Jawra
- f. Forest blocks on River Parvati - Dilod, Balapura, Jalwara¹⁵
- g. Shahbad - Kunda Khoh
- h. Others - Amrod, Ratadevi, Aklera, Imliwala, Borban

In 1911, Queen Mary participated in a tiger hunt at Umaidganj near Kota. Although the Queen did see a tiger, her party missed shooting it.¹⁰

Hunting expeditions were a common form of entertainment in the State. In the latter half of the 19th century, such arrangements cost the State 200,000 rupees annually.¹⁶ These were elaborate affairs with the most expensive part being a feast given to all participants of the *hanka* party at the end of a successful shoot.

Sometimes hunting opportunities allowed for relations between states to strengthen to the extent of matrimonial alliances. The alliance between Maharao Bhim Singh II (1940-91) to Maharaj Sir Ganga Singh of Bikaner's daughter can be considered one such case. This also meant the host had no control over how much such privileged guests could hunt. Maharaj Ganga Singh and his son Maharaj Sadul Singh probably shot more tigers in Kota than any other visitor to the State.^{12, 13} An entry on 19th April, 1920, in Maharaj Ganga Singh's diary mentions of news of "no less than 11 tigers from different places around here" referring to an area around Shergarh.¹²

Sarthal was another principality in Kota State that had high numbers of tigers.²⁵ Thakur Shivdan Singh had in 1920, already achieved a figure of 33 tigers that he had shot, the same year that Maharaj Ganga Singh shot his 100th tiger at Choti Tali in Sarthal.¹²

Invitations for tiger hunts were generally reserved for high status European guests or rulers from other states. These were grand events and involved well-organised hankas where beaters in hundreds flushed animals from a selected part of the forest towards the hunting party. In Kota, these shoots would take a unique form when the hanka party would drive animals down the ravines of River Chambal, while the hunting party would move along the river on boats.¹⁹ At regular intervals along the banks of the river, shooting lines cleared off all vegetation would allow uninterrupted visibility of animals and a chance to fire.²⁴ Some guests such as Maharaj Sadul Singh however, had their reservations about the efficiency of the "noisy and jerky" boats used in Kota.⁶ Between 1920 and 1965, 334 tigers were shot in Kota State.¹¹

Maharao Bhim Singh II shared most of his father's interests and hobbies. Within his lifetime he shot around 300 tigers.²⁴ During this period 12 to 15 tigers were shot annually in the region.¹⁹ Shahbad was one of the preferred tiger hunting grounds of the rulers of Kota²² with a maximum of five tigers having been shot in the area in one day. Like his father, Maharao Bhim Singh II too was interested in photography. He is known to have not just photographed but also filmed some incredible moments of tigers in the wild. Impressed with his tiger photography, National Geographic Society is said to have gifted him a huge metal cage,²⁵ although we could never clearly determine the purpose of this cage. While some claim that the cage was meant for the protection of the photographer during photographing tigers,²⁵ others claim it was used to hold captive tigers which in turn attracted wild ones to the area and were then hunted or photographed by the rulers.²³ There may be a possibility that the cage being referred to is in fact two



Plate 4. A shooting box on the banks of River Chambal



Plate 5. Remnants of old shooting boxes around Umaidganj near Kota

different cages for different purposes. In search of the mystery cage, we were directed to Umaidganj. In this highly cultivated landscape with extensive paddy fields, we were informed the cage used to be present until recent times. However, less than a decade ago, it was gradually broken down and the metal taken away by local people. The presence of several shooting box like structures still standing erect in this landscape, however, did allow one to imagine the presence of some wildlife worthy of a king's attention in this area in the past.

Decline of the Tiger and Other Wildlife:

Post merger of states, in 1947-48, there were 40-50 tigers in the former State of Kota.²² However, during this period, the assault on the tiger accelerated. Simultaneously the forests around began to diminish rapidly. Based on information obtained from some tiger trophies available in private collections and at public museums, in the early 1950s, tigers were frequently hunted by erstwhile royalty in places such as Chambal, at Amrod, Kunda Khoh, Imliwala and Banskho. The table below shows numbers of tigers killed for which the Forest Department earned revenue. Considering members of the erstwhile royal families were exempted from paying a hunting fee, these were tigers hunted by people other than members of the royal family.

Table 11.1 No. of tigers killed in Kota, Baran and Jhalawar Forest Divisions in 1950s.

Year	Total number killed
1950-51	3 ²⁷
1951-52	5 ⁹ +2 ²⁷
1952-53	7 ⁹ +3 ²⁷
1953-54	2 ²⁷
1954-55	1 ²⁷
1955-56	3 ¹⁴ +2 ²⁷
1956-57	1 ¹⁴ +6 ²⁷
1957-58	1 ²⁷
1958-59	4 ²⁷
TOTAL	40

Between 1955 and 1961, 35 tigers were killed in Baran Forest Division¹⁴ which includes part of the former Kota State and a small part of the erstwhile State of Tonk. No shooting fee was collected for these 35 individuals killed since they were either hunted for special reasons (e.g. turning man-eater or cattle-lifter) and/or were hunted by members of the royal households of Kota and Tonk, with the former having access to more territory and hence more tigers. During the same period, at least four licenses were given for problem individuals (three man-eaters and one cattle-lifter) in the area under Kota Forest Division.⁹

As evident from the figures mentioned in the table above, the largest numbers of tigers were being hunted in Jhalawar Forest Division which included parts of the erstwhile states of Kota, Jhalawar and Tonk, with the largest area belonging to the erstwhile state of Kota. During the same period (1950 to 1960), in Jhalawar Forest Division, apart from the licenses given to hunt 24 tigers (mentioned above in the table), 56 free licenses were given to hunt man-eating or cattle-lifting tigers.²⁷ Whether all these licenses translated into dead tigers is not clear, however, in most likelihood it probably does indicate that the license counted was for a dead animal. This may make one ponder as to why there was such a surge in the number of problem tigers at this point in this area. There are several speculations one can make, some of which are: a) Increased attempts at hunting tigers in the area resulting in wounded animals, which

eventually take to hunting cattle or men. b) Decrease in prey populations forced tigers out of the forested habitat into human-dominated landscapes with heightened human-tiger conflict. c) Corruption in the administrative set-up resulted in non-declaration of tiger hunting fee.

All of the above figures clearly indicate that at least 100 tigers were shot in this landscape between 1950 and 1960, majority of them by former princes. Sankhala places this figure at 41 for the period between 1956 and 1967 in the forested area of contemporary Baran district.¹⁵ However, between 1962 and 1967, each year a maximum of one tiger was hunted,¹⁵ indicating that this probably was the end of tigers in this landscape which was shared between the erstwhile States of Kota, Jhalawar and Tonk with the latter two having very small areas under their jurisdiction compared to Kota.

By 1960s, the tiger was left restricted to small pockets of forest such as Darrah, which today constitutes a part of the Mukundwara Tiger Reserve. In 1964, a bus full of passengers witnessed a fatal fight between a python and a tiger near Kota.¹¹ Around the same time Nawabzada Aimaduddin Ahmad Khan saw them on several occasions around Darrah while in 1967 Major Abhay Singh was injured by one in the same area.²³ Until 1968-69, tigers continued to be seen by people in Darrah.²⁵ Around 1969, a reliable guesstimate still put the population of tigers in forests of Baran at 20, a figure higher than that for any other part of Rajasthan including Sawai Madhopur and Sariska.¹⁵

Vijai Salwan, an IFS officer says, in 1978, one of his colleagues' reported tracks of tiger from Darrah. However, by this time decline of the tiger from Kota region was irreversible. In 1984, a sub-adult male individual was sighted in Chippabarod area but was promptly shot by a local Station Head Officer.²¹ This was to be followed by the last of the migrations, Broken Tail and a tigress (T-35) at Sultanpur.

In 2002-2003, Broken Tail a male tiger from Ranthambhore Tiger Reserve travelled to forests of Jawahar Sagar in Kota and spent the longest time at Khadak ki Khaar where it made 13 cattle kills.²⁰ Unfortunately in 2003, the individual was killed when it was hit by a train on the busy Delhi-Mumbai railway line. This was followed by T-35, a tigress from Ranthambhore moving into Sultanpur and Itawa Ranges of Baran district in December 2009. This female continued to live in this area until March 2016, when she was found dead near Kheyavada village.

Not just did the tiger numbers plummet during this period, but also populations of other wild species. In the 1890s, for jungle ten miles outside of Kota, a European visitor writes, "it was impossible to see an animal a yard off" since the jungle was so dense.⁴ Similarly, the road to Jhalarapatan from Kota, near Kaithoon had dense forest on both sides.²⁰ Post merger of states, forests in Kota started declining rapidly and with it wildlife.

Deforestation, over-grazing, encroachment of forest land, exploitation of forests for personal interests and benefits of politicians and uncontrolled quarrying have all been cited as reasons for decline of wildlife in the area.²⁶ Around early 1960s, this region saw a large influx of people from the Gujjar community. Gujjars came from areas around Ajmer²³ with their livestock which resulted in over-grazing of areas around Kota and severe resource competition between wildlife and domestic cattle.^{18, 21} Simultaneously, forest encroachment became a major issue.²¹ With rapid expansion of Kota town, partly due to growing human population and partly due to increased immigrants that came to work at the newly proposed hydro-power sites, not just demand for milk increased but also for construction material. This resulted in increased quarrying in the region.²³ All these reasons along with a passive attitude of the Forest Department resulted in severe decline of wildlife and forests of this region.

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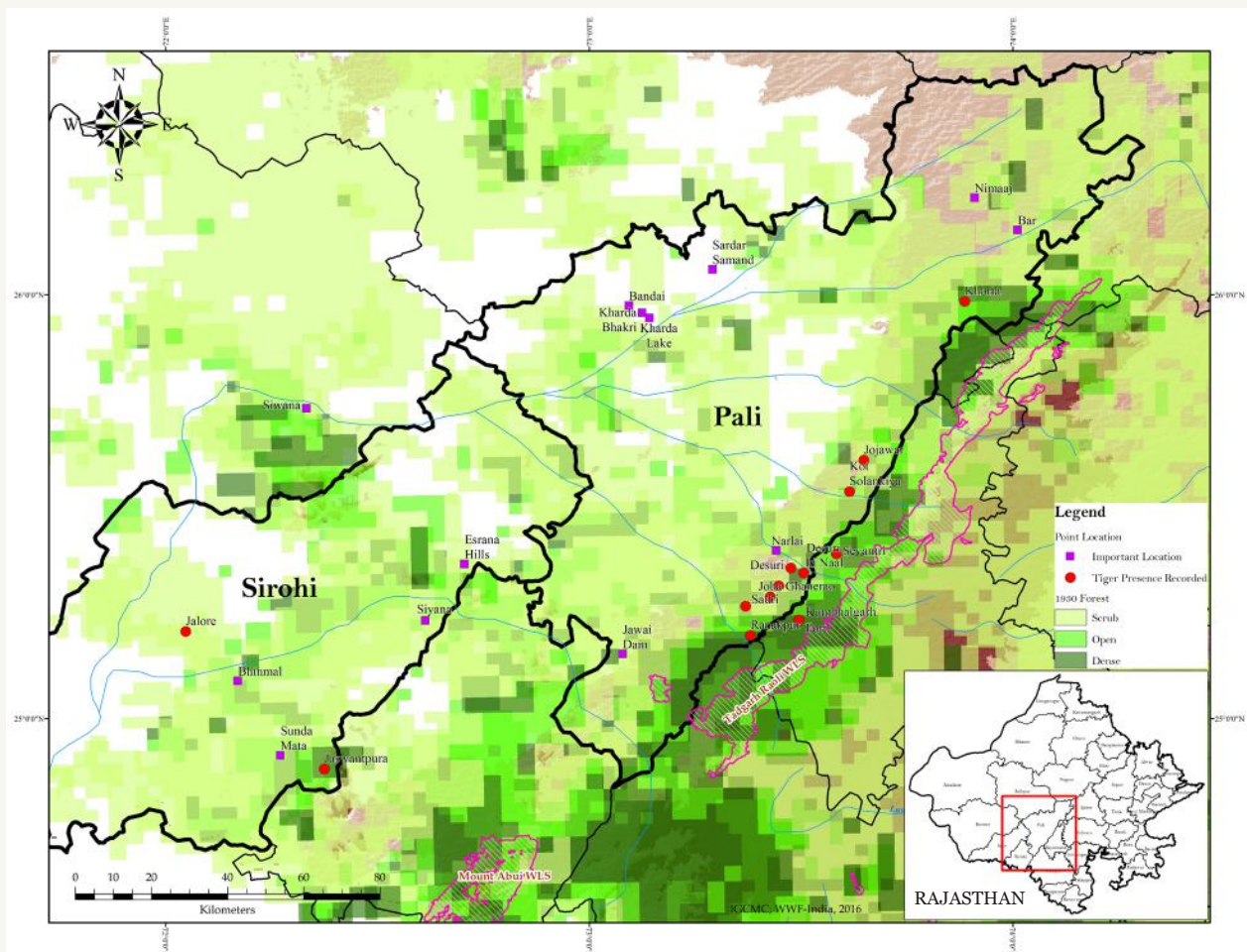
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13. Marwar (Jodhpur)

The erstwhile State of Marwar included the present day districts of Jodhpur, Pali, Barmer, Jalore and Nagore and covered an area of 90,808 sq. km. It was bounded to the north by the Sambar Salt Lake which separated it from Jaipur while to the east the Aravalli Range of hills formed the boundary with Mewar. Luni is the main river in the region that came to life only in years of good monsoon.

Forests:

Forested areas in the State were restricted to the Aravallis in the east and other ranges such as Jaswantpura (Sunda Mata) Hills, Jalore Hills and Siwana Hills to the south and south east. In early 1900s, an area of 895 sq. km. of the State was under forest, restricted mostly to the Aravallis.³ Of this 713 sq. km. was the property of the ruler and the remaining 182 sq. km. of the jagirdars although managed by the State.³ In the remaining parts of the State, scrub forest along with grasslands dominated.



Map 13. A 1930 forest cover map of parts of Jodhpur, Pali and Jalore Districts depicting locations with confirmed historical presence of tigers.

Wildlife:

Blackbuck, chinkara and wild pigs were found in large numbers across the entire plains region. Four-horned antelope were found in the Aravallis and the Jaswantpura Hills while sambar were found in the Aravallis, Jaswantpura Hills, Kuchaman, Jalore Hills.¹ Chital, albeit in low numbers were found in the lower parts of the Aravallis.¹ In 1872, Colonel Hayland shot four lions near Jaswantpura.¹ In most likelihood these were the last lions of Marwar. Wolves were common in the western parts¹ and wild dogs were rarely seen in the forested areas.^{1,3} Sloth bear were found in all hills including those of Jalore and Siwana. Leopards had a widespread distribution and were found even in relatively isolated hills such as those around Jodhpur, Sardarsamand, Kharda, Mithdi and Garh Siwana.⁵ Hyenas were found as far west as Rajlani and Bhopalgarh.

Adam Archibald mentions of black partridge in Bhinmal, Jaswantpura and Khajwana areas and also wrote that both species of florican, viz., “*aurita* and *bengalensis*” visited the grasslands of Marwar during monsoon and left before winter. This information may be incorrect since only the Lesser Florican (*Sypheotides indicus*) is known to visit Rajasthan and I am unable to comprehend what he may have been referring to as the second species of florican visiting this area. Also, Black Francolin (*Francolinus francolinus*) is no longer found in the above mentioned area.

Pig-sticking:

With a strong tradition of horsemanship, Jodhpur emerged as the capital of pig-sticking in Rajputana.⁴ Wild pigs were found in the grasslands and scrub forests of Godwad, Jalore and the Aravalli foothills.¹ They were also found in the hills neighbouring Jodhpur where they were carefully preserved and enticed to come down into the plains for foraging.⁴ This would provide horsemen enough time to chase and spear them. Particularly during the reign of Sir Pratap, this sport received tremendous encouragement with much money being spent on feeding and preserving the pigs.

Distribution of the Tiger:

Erskine writes of the tiger being present in the Aravallis, Jaswantpura and Jalore Hills though in declining numbers in early 1900s. Chappan ka Pahar, about 40 km. long two parallel ranges in Siwana tehsil had an occasional tiger until early 1960s.⁵ The last stronghold of the tiger in Marwar, however, was most likely the Kumbhalgarh Wildlife Sanctuary in the Aravallis.

Places where tigers were found in the State:

- a. Kumbhalgarh - the Aravalli Hill range of Kumbhalgarh separates Marwar from Mewar and hosts forests dominated by *Anogeissus pendula*, *Boswellia serrata* and *Diospyros melanoxylon*. Sadri, Desuri and Khorla Ranges of Jodhpur Forest Division were believed to have tigers of which only Sadri and Desuri ranges had 2-3 individuals by the onset of the 1960s.² Presence of shooting boxes in Bagho ka Bagh in Ghanerao and in Narlai indicates that big game of some kind was being hunted there.⁹

Year	Range	Location	Witness	Details
¹³ 1969	Sadri	Sevantri	V.D. Sharma	A tiger pug mark was carefully preserved under a basket by people making charcoal in the area.
¹⁰ 1967-68	Sadri	Near Ranakpur	Shri Sundar Singh, Shri Mahaveer Singh Bera	Cow kill

Year	Range	Location	Witness	Details
¹² 1966-67	Desuri	Kot-Solankhiya	DFO Jaswant Singh, in his early 20s along with other local people	In a wild boar hanka saw a tiger.
¹² Around 1966-67	Desuri	Jojawar	Local villager from the Meghwal community	While sitting at a waterhole to hunt wild pigs, saw a tiger.
⁸ 1964-65	Desuri	Desuri ki Naal	Shri Gaj Singh II and Shri Sundar Singh	Saw a tigress at night
¹² 1964	Sadri	Joba (place that went on to become famous for its wolf sightings)	Unknown	Tiger sighted
¹⁵ 1964	Sadri	Ghanerao- at a natural waterhole	Thakur of Ghanerao	Tiger killed

- b. Jaswantpura- Chakia, Jiwia, Jaswantpura and Sundamata had tigers. Rising to about 1220 metres at its highest, Jaswantpura, most likely received transient tigers from the Abu Hills. Since this range was further connected to hills of Sirohi, tiger movement here was vast and most likely until the 1950s. Erskine writes of tiger in this area but in diminishing numbers.³
- c. Jalore and surrounding Hills - The only existing evidence of tigers in this area comes from a cenotaph eight kilometres north of village Siyana. This sandstone monument was built in memory of Rani Bhityani Saheb of Jodhpur, one of the seven wives of Maharaja Takhat Singhji (1843-1873), who lost her life to a tiger at this spot while on a tiger-hunt.¹¹ Erskine also writes of tigers in these hills but in diminishing numbers.³
- d. Siwana Hills - Until the late 1950s, an occasional tiger was reported from the eastern extremities of these hills,⁵ although this information may not be reliable.

Decline of the Tiger and Other Wildlife:

Marwar was never a stronghold of the tiger and few tigers would venture into this territory.¹⁰ Maharaja Umaid Singh II of Jodhpur, a keen shikari, never shot a tiger in Marwar and would prohibit others from doing the same.⁹ Incidentally, he passed away in Mount Abu in June 1947 after an appendicitis rupture while on a tiger shoot in Danta. No one, other than the rulers of Marwar were permitted to shoot tigers or leopards in Marwar unless special permission was granted to them.⁹

Leopards were commonly found in many parts of Marwar until 1950s. The Nawab of Palanpur in early 1940s shot a leopard near the hunting preserve of Sardarsamand at Kharda Bhakri.¹⁰ This little hillock stands right by the roadside on Jodhpur-Pali Highway. In over 60 years since that leopard was shot, no one has seen or heard of a leopard in that entire landscape.

Leopard populations have also declined drastically in parts of the Kumbhalgarh Wildlife Sanctuary, Bar Hills, Siwana Hills of Barmer and Esrana Hills of Jalore. A population estimation study for hyenas conducted in 2008, photo-captured less than five unique leopards in a trap polygon covering 165 sq. km. of Kumbhalgarh Wildlife Sanctuary and around five individuals in a 110 sq. km. area around Esrana Range in Jalore district.⁷ Incidentally, the same area in Jalore today (seven years later) has infrequent reporting of only one leopard.¹¹

However, in some parts of erstwhile Marwar, leopard populations seem to be on the rise, primarily due

to reduced hunting of the species for sport in combination with a sudden boom in leopard tourism. The rocky hills around Jawai Dam always hosted leopards. However, in the last decade, either their populations have increased with enhanced protection or they are more visible. In recent times, sightings of up to seven individuals together are not rare from this area.¹⁴ Similarly, in areas such as Nimaj near Bar, leopards seem to be making a comeback with at least one individual sighted in recent times from the area post a gap of over a decade of no leopard sightings.¹¹

The most severe assault, however, was on the blackbuck, post-independence. Areas such as Kharda and Bandai were royal preserves and had thousands of blackbuck and wild pigs. They were managed by the Shikarkhana Department and arrangements were made for supply of water and feed to the animals. Maharaj Sobhag Singhji* says, “Kharda was half black and half white in the evenings. It would take us almost 30 minutes to let blackbuck cross the road in Kharda”. Even in the 1960s, this area had blackbuck in the hundreds. Indiscriminate hunting by local people from Pali town¹⁰ combined with incessant hunting by officers of the defence forces, are believed to be the main causes for the disappearance of this entire population.

Note:

*He was present when Mohan, the famous white tiger of Rewa was captured. On 26 May 1951, near the village of Bagri, a white tigress with four cubs came out in a hanka. Martand Singh of Rewa was already informed of the white cub by his shikaris.⁶ Maharaj Swarup Singh shot the tigress while Maharaj Ajit Singh shot the two cubs.⁶ Mohan, the white cub was caught alive the next day.⁶ Maharaj Sobhag Singh says Mohan was over eight feet when captured. However, he still was very shy and afraid, even of goats.

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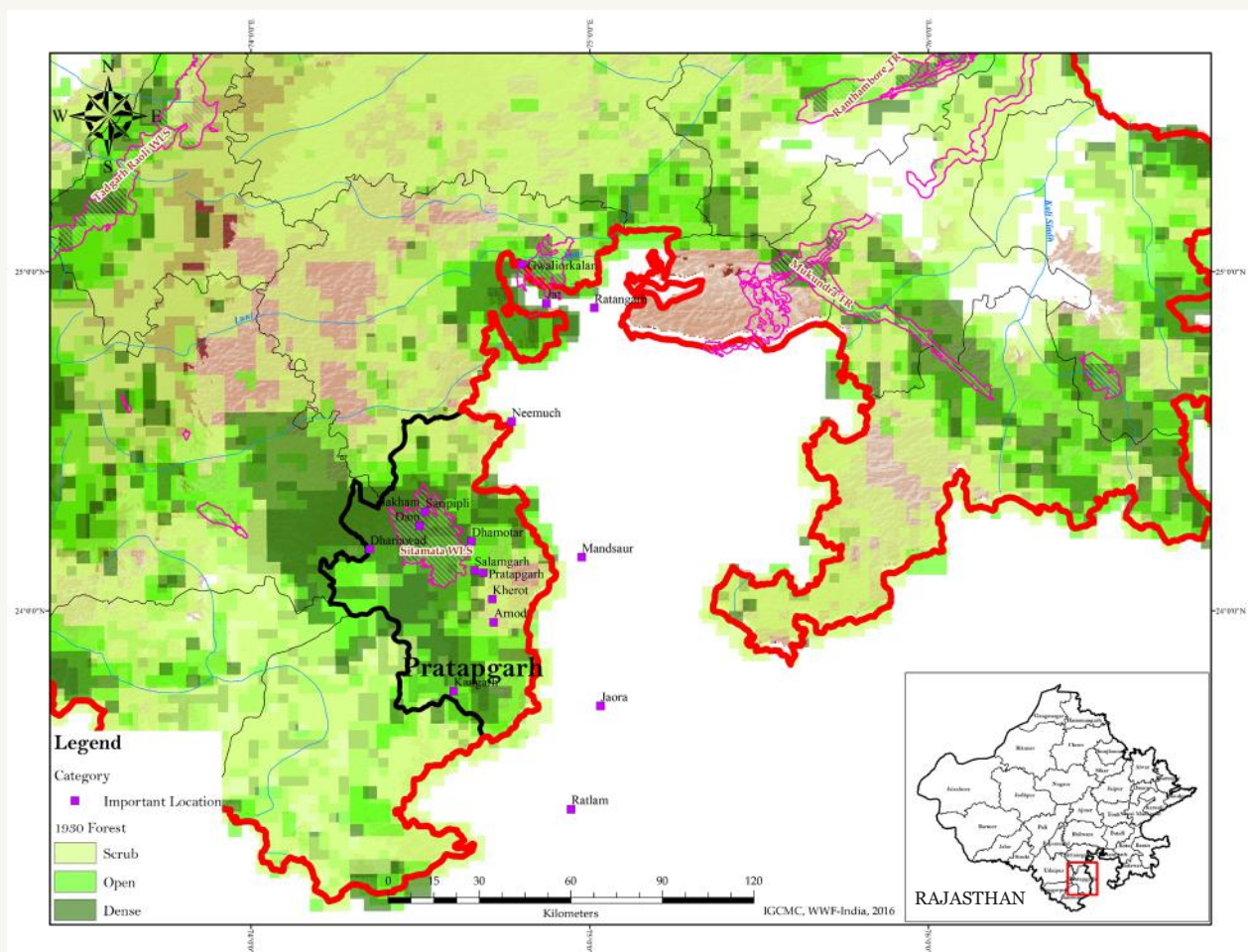
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14. Pratapgarh

The erstwhile State of Pratapgarh was located along the southern border of Rajasthan with Madhya Pradesh, at the junction of the Aravallis and the Malwa Plateau. It occupied an area of 2300 sq. kms. surrounded by an assortment of princely states which included Mewar and Gwalior to the north; Mewar, Dungarpur and Banswara to the west; Banswara, Ratlam and Jaora to the south and Gwalior, Jaora and Indore to the east.³

The area to the north and northwest of the State was hilly and hence called ‘magra.’³ In this region the highest elevation of the hills is around 600 meters while in the southwest they go up to 580 meters near Kangarh.³ To the east, the area is contiguous with the Malwa Plateau, attaining the same elevation.³ Jakham, Mahi and Shiv are important perennial rivers flowing through the region. The western boundary of the erstwhile state with Mewar was formed by a high range of hills.⁶



Map 14. A 1930 forest cover map of Pratapgarh District depicting locations with confirmed historical presence of tigers.

Forests and Wildlife:

The hills to the north and west had forested areas.³ Forest was the main source of revenue for the State although not much attention was paid to it. In early 1900s, a trained Forest Officer was jointly appointed by the 'Vagad' States to assist with the forest management.² Around this time, the State also recognized the need to place checks on burning of forests and indiscriminate forest felling through a set of watch keepers.²

The common trees species found in the forests were *Tectona grandis*, *Dalbergia sissoo*, *Diospyros melanoxylon*, *Adina cordifolia*, *Boswellia serrata*, *Terminalia bellirica*, *Anthocephalus cadamba*, *Madhuca longifolia* and *Ficus* species.² *Madhuca longifolia* was an important tree, the flowers of which were used by the locals to brew an alcoholic beverage while the timber was used to build girders for homes.⁷ The State exhibited complete ownership of the sandalwood trees which were found across the State,² although more common in the south around Badwal Kalan and Hatuniya.³

The dominant communities of the region were the Meenas and the Bhils, who depended extensively on forests. During the several weekly markets across the State, comprising of Saripipli in the north; Salamgarh close to Pratapgarh; and Arnod and Kherot to the south, the rural inhabitants brought timber from the forests to sell.³ These markets were an important source of revenue to the State generating over 7000/- in 1905-06.² Timber traders from Mandsaur and Neemuch in present day Madhya Pradesh and Naseersabad near Ajmer were regular visitors to these markets.² This region also had a high diversity of bamboo species and auctions for which would be held at weekly marts even in the mid 1950s.⁷

Dense forests were found around Udhari Mata which was sacred to the Meenas.⁷ Bhenwa was another place known for its forests, although these forests got submerged under the waters of the Jakham Dam when it was constructed.⁷ Saripipli located northwest of Pratapgarh, close to Jakham Dam also had dense forests⁷ and hence the weekly timber market close by was popular.

To the west of Pratapgarh town is located Sitamata Wildlife Sanctuary. This protected area was established in 1979 and covers an area of 423 sq. km., at a junction of the Aravallis, Vindhya and the Malwa Plateau. Some forested areas within Sitamata such as Kalia Aamba, Mogia Aamba, Sitawadi and Ramgarh were known for their forests in the princely era.⁷ During the 1960s, this area was under commercial felling of teak.⁴ This was followed by overgrazing and excessive lopping of tree branches for fodder and NTFP collection.⁴ The final outcome is a highly degraded forest with stunted remnants of teak trees.⁴

Wildlife

The geographical location of Pratapgarh supports high floral and faunal diversity. Until the mid 1900s, forested areas of Pratapgarh to the west supported species such as the tiger, leopard, sloth bear, hyena, sambar and chital.⁶ Other uncommon species such as the four-horned antelope, mouse deer, ratel, pangolin and the Indian giant flying squirrel are also reported from this region.¹ Chinkara and blackbuck were found in the plains.⁶ Records of *dhole* from the early 1900s, also exist from this region.

Distribution of the Tiger and Other Wildlife:

Forests in the erstwhile State of Pratapgarh supported tigers until the 1940s. Thereafter, the species is believed to have survived until the mid 1950s in the forests of Sitamata.⁷ Maharawat Sir Ramsingh II (1929-49) was an ardent hunter and had shot many tigers in his lifetime.³ I am presuming that at least

some of them were shot in Pratapgarh, indicating that the region did have the species until the 1940s.

Based on the literature searches, it can be concluded that even if tigers did exist in Pratapgarh, they were in very low numbers. The rulers of Bikaner who went hunting tigers across Rajasthan and whose game diaries give incredible information on distribution of wildlife from the late 1800s to the early 1940s never made a mention of having hunted tigers in Pratapgarh, although they visited the neighbouring tiger bearing forests of Chittorgarh, Kota, Ratangarh and Neemuch on multiple occasions.

Post independence, local aristocrats of Pratapgarh also visited shooting blocks in Madhya Pradesh to hunt tigers. They would travel to Ratangarh, Jat and Gwaliorkalan, all located right along the border of Kota and Madhya Pradesh, where the forests apparently had high populations of tigers and their prey such as chital and sambar.⁷ In some of these places, tigers used abandoned iron ore shafts to rest in during the day.⁷ This made hunting them even easier since one was not required to lure a tiger with bait or flush it out through a beat. Until the 1970s, this area had tigers.⁷

Pratapgarh did however support a high population of leopards and members of erstwhile noble lineage do ascertain that there were people in Pratapgarh who shot over 100 leopards in their lifetimes.⁷ By the 1950s, both chital and blackbuck had disappeared from the larger part of State.⁷

Around 1975, with the construction of the Mahi and Kadana Dams in full swing, local inhabitants of those regions started to relocate. Most of them chose the forest of Sitamata which still was not notified to settle down in. Similar story prevailed with the oustees of the Jakham Dam. Having set a trend, when a drought hit Kushalgarh region of southern Banswara, many people once again chose to move to the greener pastures of Sitamata.

The outcome of the multiple immigrations to Sitamata has meant that the protected area is also a home to many people. There are 14 Gram Panchayats within the reserve comprising of 193 villages.⁵ Of these 8 Gram Panchayats constituting 96 villages are within the core area.⁵ Most of these people belonging to the Meena and Bhil community depend on NTFP collection, a substantial part of which comprises of tendu leaf collection for the beedi industry.⁵

Although the forests of Pratapgarh had already started disappearing by the 1950s due to commercial timber extraction by the government, the enhanced human induced pressures in later years dealt the final blow. By 1994, ungulate populations in Sitamata were already dismal. In recent times, it is unusual to find any of the generally common forest ungulates here. The few species that continue to survive in these forests include a rare leopard or the four-horned antelope, Indian giant flying squirrel and smaller nocturnal mammals such as the ratel, common palm civet or a rare sighting of the rusty spotted cat.¹

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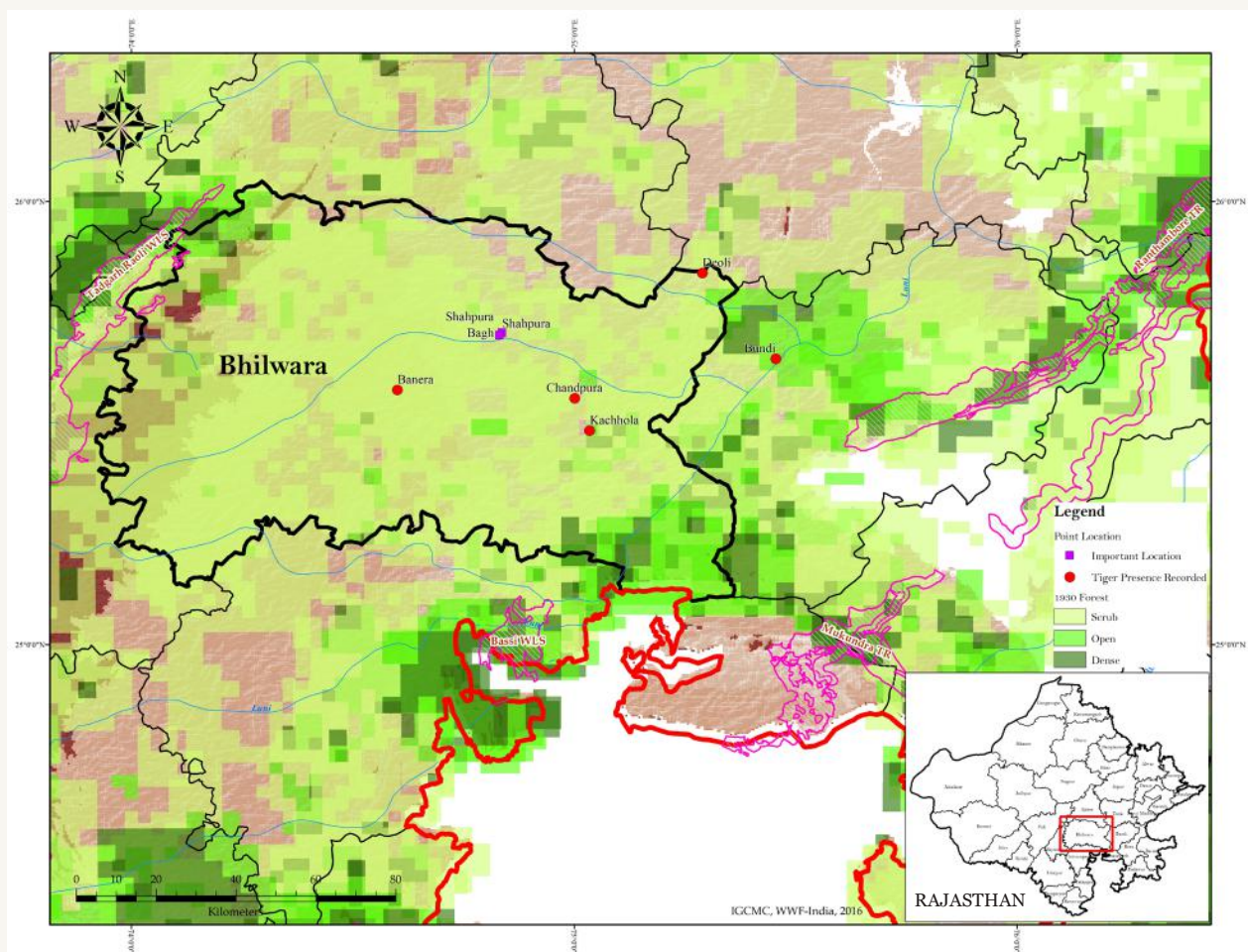
15. Shahpura

Located in present day Bhilwara district was the State of Shahpura. To its south and west was Mewar, east had Bundi; to the north was the British Province of Ajmer-Merwara and Kishangarh in the northeast.² The entire state covered an area of around 1000 square kilometres.² Along its eastern extremity flowed River Banas.

Forests and Wildlife:

This region did not have large areas under dense vegetation, although there were extensive grass reserves¹ of which at least 16 existed.⁵ These reserves supported large herds of blackbuck, chinkara, wild pig and other small game.² Lesser Florican was a regular monsoon visitor.⁵

Located in a relatively dry zone of Rajasthan, water shortage was a constant issue that plagued this region. In order to overcome this problem, the different chiefs of the State built over 250 water reservoirs of varying sizes in the area, one of them being Umaid Sagar built by Maharaj Umaid Singh II.⁴ Most of



Map 15. A 1930 forest cover map of Bhilwara District focussing on areas around Shahpura, depicting locations with confirmed historical presence of tigers.

these attracted large numbers of waterfowl in winter months and hence the region came to be known for its duck and geese shoots.⁵ Similarly, the grasslands supported large populations of wild pig and hence pig-sticking was a popular sport practised here.³

Distribution of the Tiger:

Tigers were never found in large numbers although the south-eastern part of the State, particularly along the banks of the Banas did support some individuals until the 1950s. Places where tigers were found in the State:

- a. Kachhola - This area is located to the southeast of Shahpura and north of Mandalgarh along the east bank of the River Banas. There were several old, disused mine shafts in this belt. During daytime, these shafts remained significantly cool compared to the temperature outside and hence were often used by tigers to rest in during day time.³ Shri Indrajit Singh says that the jungle in this area used to be full of tigers. The last known tigers shot in this area were in 1927 by Maharaj Umaid Singh II.³ These were three full grown males shot on the same day.³ A photographer was flown in from Bombay to photograph the rare event.³
- b. Chandpur (Berunda) - Chandpura is located about 30 kilometres from Shahpura on the west bank of River Banas. This area had dense *Anogeissus pendula* forest and tall grass and just as in Kachhola, tigers would seek shelter in disused mine shafts during the day.³ Young buffalo bait would be tied to lure them out in the evenings and shoot them. Shri Indrajit Singh shot two tigers here during his lifetime while his father also shot some individuals in the same area.³ The last tiger shot here was in 1952.³ This area had forest connectivity with Bundi via Deoli, a corridor also used by tigers.
- c. Banera and Chaklianaji - Although very rare, tigers would come up to these areas.³

By the 1950s, tigers in this region started vanishing, primarily due to loss of habitat. This was a period marked by extensive deforestation in areas bearing tigers.³

Decline of the Tiger and Other Wildlife:

In 1968, Shri Indrajit Singh and his friends started a safari company. It was already difficult to get permits to shoot tigers in Rajasthan since the species had almost disappeared from the State. Hence the three or four tigers the company managed for its clients were in Raghogarh and Chandia in Madhya Pradesh; and in the Terai of Uttar Pradesh.³

The disappearance of the blackbuck from this area is most striking. At the time of independence, Shahpura had around 700 blackbuck.³ Today, not a single one of the species survives in the same landscape. Similarly, the lake behind Shahpura Bagh supported many wild boar.³ These were strictly protected and even members of the royal family were not permitted to shoot them without permission.³ Permission was granted only to hunt them using a spear.³ If caught using a gun to shoot the wild pigs, a fine was imposed on the perpetrator irrespective of his social status.³

Leopards and hyenas also disappeared from Shahpura by the 1950s and the wolf by the 1990s.³ The other large carnivore, sloth bear was historically never known from this area.

Water fowl numbers have also declined since the lakes are now used to pump water for irrigation to agricultural fields. Hence, reservoirs that would store water until February-March now dry up by December.⁴

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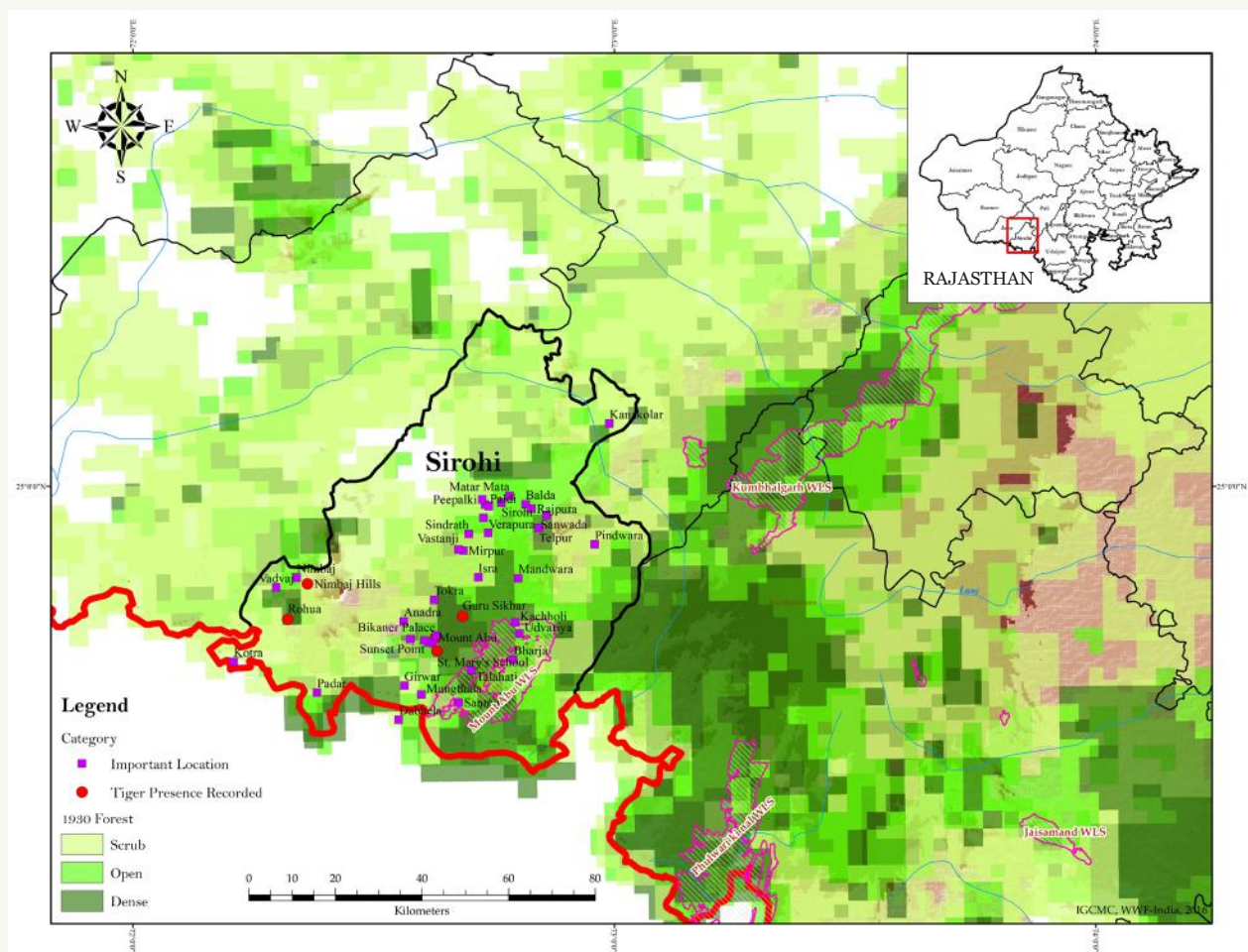
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16. Sirohi

The erstwhile State of Sirohi was bounded to the north and west by the erstwhile State of Jodhpur, Udaipur in the east and Palanpur, Danta and Idar to the south. The entire State was dominated by hills and boulders with the only relatively flat area to the west.² A main hill range was located between Erinpura, a British cantonment on the northern border of Sirohi, to the Abu Hills in the south.² The southern boundary of the State was formed by the Aravallis and the Abu Hills. These two ranges run parallel to each other and are separated by a 25 kilometre wide valley. Western Banas, the most important river of the region flows through this valley on its way to the Gulf of Kachchh.

Several important hill ranges shape this region. The south-eastern part is called the 'Bhakar' region with steep valleys and highly undulating landscapes.² In the central part, the Sirohi Range establishes contact with the Aravallis north of the town of Pindwara while on the western extremity of Abu are located the Nimbaj Hills.

One coveted settlement that bought Sirohi much fame was Mount Abu. In his book 'Travels in Western India' James Todd refers to Mount Abu as his discovery, in June 1822.² Abu Hills form the highest



Map 16. A 1930 forest cover map of Sirohi District depicting locations with confirmed historical presence of tigers.

tableland between the Himalaya and the Nilgiris with Guru Shikhar being the highest peak at 1723 metres.² The British took Abu on a permanent lease from Maharaj Keshri Singh of Sirohi at Rupees 27000 per annum and made it the headquarters of the agent to the Governor-General of Rajputana.² Furthermore, English soldiers plagued by the miseries of the heat of the plains were sent to Abu to regain their strength.⁴

Forests and Habitat:

The Aravallis in this region supported dense low growth *Anogeissus pendula* and *A. latifolia* trees in combination with shrubs and grass while the Abu hills had dense forest along with bamboo.¹¹ The hill tracts of the 'bhakar' region near Dildar experienced 'walar', a form of shifting cultivation practiced by the Garasiya and Bhil tribes.² Despite 'walar', most parts of the 'bhakar' region and the hills at the base of Abu had dense forest.² Higher reaches of Pindwara and Abu had sub-tropical evergreen forest while Abu Road and lower hills of Abu supported mixed deciduous forest.¹¹ No settlements or demarcations existed for most of these forests and only in 1942 around 200 sq. km. of reserved forest was notified.¹¹

Western parts of Sirohi had lower, isolated hills with sparse forest. Hence, some amount of agriculture was practiced in this area and human habitation was possible, making it the most populous part of Sirohi.²

Forest Laws and Protection:

Unlike many ruling families of erstwhile Rajputana, that of Sirohi did not lay much emphasis on hunting as a sport,¹³ although they did have rules for preservation of wildlife. 'Kaylana' were special preserves notified for the protection of wildlife where animals were also fed.¹¹ Hunting in these areas was strictly prohibited. Some of the known 'kaylana' were Matarmata, Dabela, Makroda, Bharja, Karodidhaj, Telpur, Peldar, Siadrath and Kanakolar.¹¹

However, most attention with respect to preservation was focussed on Mount Abu due to its continually expanding population of Europeans and nobility, most with interest in hunting as a sport. In 1845, a State rule prohibited hunting of blue rock pigeon and peafowl in Abu,⁵ most likely due to religious sentiments associated with both species. In 1868, a ban was imposed on cutting and burning of trees at Abu and along its slopes, making 'walar' cultivation illegal at the higher reaches of Abu Hills, although it was permitted at lower elevations.²

By 1889, the Abu Wild Birds Protection Law was passed imposing restrictions on hunting in certain parts of Abu and declaring open and closed seasons for hunting birds (partridge, jungle fowl and spur fowl) and animals (sambar, chital, four-horned antelope and hare).³ Furthermore, hunting was permissible only for license holders which too were to be regulated.⁵ This law covered all of Abu Hill along with Anadra and Kharari.⁵ A total prohibition was imposed on hunting waterfowl or does at the Nakki Lake.⁵

In 1897, Mount Abu Wildlife Sanctuary was notified and declared protected.¹⁴ In the same year, further rules were added to regulate hunting across Sirohi State, making it necessary to obtain shooting permits for anyone to shoot in the State territory.³ These rules also made it illegal to fire at any female of an ungulate or at a wild pig.³ March to August was declared closed season with no licenses being issued for that period.³

The 1897 rules gave exclusive hunting rights to the ruler of Sirohi for areas which included Bharja,

Telpur, Isra, Udvariya, Mirpur, Mera, Mandwara, Adarli ka Vera (near Udvariya), Sionti-ro-Duro (near Vasthanji), Sanya-ro-vero (near Udvariya), Obera-ro-vero (near Vastahnji), Kachholi, Sangwada, Aspura, Kotra, Sanar, Tokra, Toda, Girwar, Mungthala and the reserve of Chandella; Sirohi and the villages near it mainly Rampura, Verapura, Palri, Pipalki, Sirohi grass bir, Kollar, Hill of Sarnua, Balda, deserted village Rajpura between Balda and Sanwara.³

By 1904, the State forest was put under the supervision of a Forest Ranger with headquarters at Abu.⁹ Under him were two foresters, one at Pindwara and another at Santpur.⁹ Around the same time, the forest was divided into:

- a. Plains forest of Rohera, Pindwara, Khuni, Bhaker and Santpur. This was divided into reserved, protected and open with the latter two categories covering 974 sq. km.⁹
- b. Hill forest mostly around Abu Road and Abu of which 23 sq. km. was under the direct control of the Forest Ranger.⁹

Wildlife:

Presence of tribes that indulged in plundering and looting across the State kept much area free of agriculture.² This meant large areas were under forest cover. While tigers were found in some parts of the State, leopards and sloth bear were common across much of the region.¹ The last lion found in the area was hunted near Anadra by a shikari belonging to the Bhil community in 1872.¹ Ungulates such as sambar and four-horned antelope were found in most hills while chital were restricted to the base of Abu Hills and the south-eastern part of the Aravallis.¹ The famines of 1868-69 and 1899-1900 however took a heavy toll on the sambar and chital population.⁵ This was especially true of sambar in the Nimbaj Hills which were reduced in their numbers drastically.⁵

Amongst canids, wolves were unknown from almost all parts of the State while jackals and fox were found in lower elevation areas and never in Mount Abu.⁵ The closest population of fox and jackals to Mount Abu was in Talhati.¹³

Distribution of the Tiger:

Information on the presence of tigers and their eventual disappearance from those areas remains a daunting task considering much of the State was occupied by hill inhabiting tribes such as the Garasiya and Bhil, both adept at hunting and immensely private about their affairs. Hence, this section only mentions of areas for which definite information could be procured.

Around 1850s, Henry Duberly writes of a Major Chetwode who straight after the 95th Regiment took over Rohua, rode out of the village looking for a tiger, “from the ravages of which the inhabitants had suffered severely but since the regiment made no halt he had no sufficient time to the pursuit.”⁴ Rohua is located around 40 kilometers east of Abu Hills and is connected to Jaswantpura of Marwar via a range of hills.

In early 1859, another British Officer, J.T. Newell and his team shot two tigers near their camp and then another two near the second camp during beats.⁶ Although, the notes do not clearly indicate the places where these animals were shot, going by the accompanying text, the places should have been near the base of the Abu Hills. The same team was thereafter informed of caves in a small hillock ten miles from the base of Mount Abu, in the plains where three to four tigers were sighted.⁶ Three of these animals were sighted by this team, two of which succumbed to their adventure.⁶ On the same expedition, another place in the ‘Mungaum’ jungle, located by River Luni witnessed tiger hunting. Several tigers were met with

or shot at this place, one of them being a female which was shot while crossing the river.⁶ Pug marks of tigers were also noticed in a forest near Oonge.⁶

By 1870s, tigers and leopards were being held responsible for large number of cattle kills in the Sirohi territory.^{2, 7} Incidentally this was around the same time when Lt. Col. W. Camell, the Superintendent of Sirohi, in 1873, had remarked how “he was unable to find a single four-footed animal larger than a jackal” in Sirohi,⁷ most likely referring to the high hunting pressure in the region. Based on these two contradicting pieces of information, it is difficult to determine the situation of wildlife in the area at that time, although it may be presumed that the area faced high hunting pressure.

Habitation of Mount Abu by the British and nobility from Rajasthan, resulted in heavy indulgence in hunting, primarily so of the large cats. Abu was never known for a breeding population of tigers and it was merely its location which allowed for migration of tigers from Mewar, Palanpur and Danta, that kept the presence of the species in the hill town.¹³ The most frequently identified route to Abu taken by transient sub-adults from the neighbouring regions was via Wagh Nala.¹³ The forested areas of Chalgargh, behind Saint Mary’s School and below Guru Shikar were the main sheltering grounds for these visitors.¹³ Each year Abu supported 10-15 individuals, almost always young males.¹³ Shri Dhaivat Singh, however, puts this figure at one to two individuals. According to Lt. Shri Devi Singh, except one, all others tigers known from Abu were males regardless of any contrasting reports. The only tigress reported from Abu was an old individual that had taken to killing people and had to be eliminated by the Bikaner Forest Department in 1946-47 after she killed her 20+ victim, a man in Aampani.¹³ Also, to be noted is that so far no evidence exists of any tigress having ever reared young ones in Abu or giving birth to them in the wild.¹³ However, this is in contrast to the information provided by the Sirohi Forest Division Management Plan which mentions of one or two pairs of tigers in Mount Abu until early 1960s.¹¹

By 1890s, tigers had become scarce in the region due to excessive hunting.¹ Around the same time heavy restrictions were imposed on hunting tigers in Mount Abu with an annual bag restricted to two animals.¹⁴ The ruler of Bikaner had a reserve of two tigers per year that he could shoot in Abu.¹³ The largest tiger shot in Abu was by Maharaj Sadul Singh of Bikaner in 1930s and was fed on buffaloes for five years and measured 10 feet 2 inches.¹³ He was called the ‘King of Sirohi’ for his size and was eventually killed behind Saint Mary’s School on a path that is now called the ‘Tiger Path.’¹² Maharaj Sadul Singh shot three tigers in Abu, one each at Achalgarh, behind St. Mary’s School and one in the tennis courts of the Bikaner Palace.¹³

Until early 1900s, tigers were also known from Nimbaj Hills.¹ However, the last place other than Abu within Sirohi territory to have witnessed tigers was Rohua. In 1956-57 a tigress with two large grown-up cubs was habituated on buffalo bait near Rohua. After the family had fed on over 15 buffaloes, Shri Dalpat Singh of Rohua shot one of the cubs while the then Rana of Sinhla shot the female.¹²

Some important locations where the rulers of Sirohi hunted tigers within the Sirohi territory include Matarmata, Bhimana and Bharja in the lowland areas and Oria and Achalgarh on the Abu Hill.¹⁵ However by the late 1960s, none of these places had any signs of the tiger.

Decline of the Tiger and Other Wildlife:

Assault on Sirohi’s wildlife started early. By the 1850s it lost its last lions which were hunted out on the Anadra side of Abu.⁵ Next to disappear was the black francolin, which originally occupied the south-western border near Marwar and Palanpur.⁵

Most parts of Sirohi were dominated by communities such as the Rajputs for who pig-sticking and hunting were common sport.⁹ Similarly, communities such as the Garasiya and Meena also hunted but for subsistence reasons. This, in combination with lack of strict legislation resulted in high hunting pressure in the State. Mount Abu was the only exception to this. Dense forest, presence of wild prey, water and restrictions on hunting supported much wildlife including tigers in Abu. While strict restrictions prohibited more than two tigers being hunted in a year at Abu, larger number of leopards could be shot. The Maharaja of Bikaner shot three leopards in and around Abu in less than a week in May 1946, one of them measuring a record 8 feet 1 inch.¹⁰ In the following year, the same ruler shot seven leopards in Abu, some in places such as Sunset Point and behind Delwara Temple¹⁰- impossible to imagine hosting any carnivore today.

Regarding the last tigers of Abu, much confusion exists with dates ranging between 1950s to 1962-63. However, Sankhala believed that Abu may have had up to two tigers even in 1969.¹⁵ Until early 1960s, there was a constant flow of tigers to the hill town. As per some, the last tiger visited Abu in early 1970s and was noticed when it stole into a chicken coop to find prey.¹² However, many disregard this story and claim there exists not enough evidence to support the claim.^{13,14}

Post independence, rules formulated in princely India lost their authority. By 1950s, few places in Sirohi supported sambar. These included Abu and the Nimbaj Hills.¹¹ Considering most forests of Sirohi were not demarcated or settled, post independence, much forested area was over-exploited and encroached upon.¹¹ Some relief came with the Rajasthan Animal and Bird Protection Act, 1951 which imposed some restrictions. However, licenses were still issued for shooting tigers, leopards and others. Some shooting blocks such as those at Matarmata, Dabela, Pahadkalan, Arnua, Vadvaj, Nimbaj, Padar, Mirpur and Bhakar were still open to shooting.¹¹ As per a 21st July, 1960, notification a closed season was imposed from 1st July to 15th October for tiger, leopard and bear.

As we enter the 21st century, several species that traditionally were found in Abu are no longer to be seen there. According to Late Shri Devi Singh, “..after sunset roads of Abu would have no two legged creatures. These were occupied by wild animals- bears, leopards and even tigers”. Today, species such as caracal, hedgehogs and porcupine that were commonly seen in this overcrowded hill station are no longer to be seen. Leopard population in the hill city has also reduced noticeably, a decline, interestingly attributed to the increasing population of free-ranging dogs and their large pack sizes, which can even threaten a leopard.¹³

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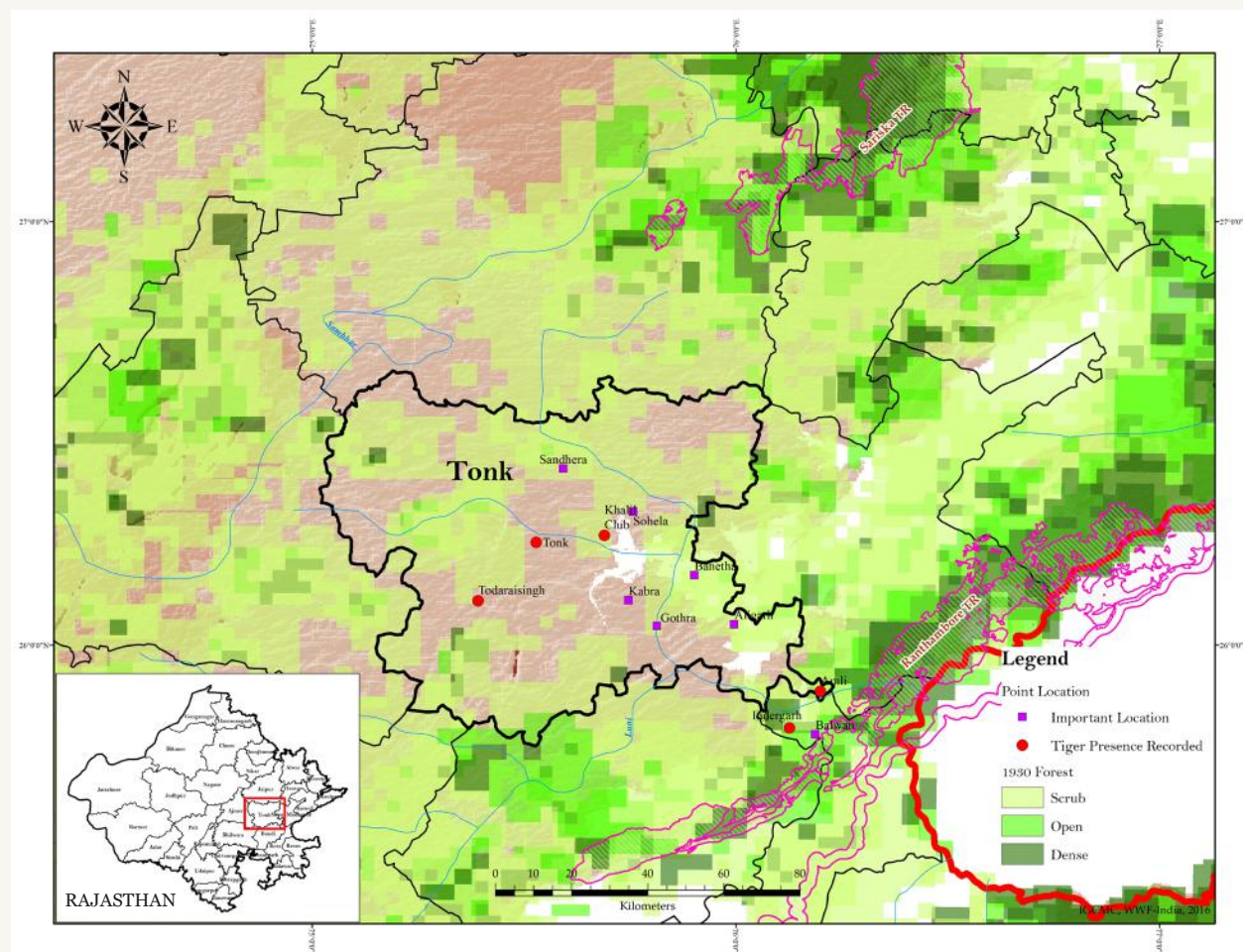
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17. Tonk

The State of Tonk comprised of six districts spread over present day Rajasthan and Madhya Pradesh. Post-independence, five of these, viz., Tonk, Nimbahera, Aligarh, Chhabra and Pirawa were included in Rajasthan while Sironj remained in Madhya Pradesh. At present, Tonk and Aligarh are parts of Tonk district, Nimbahera of Chittorgarh, Chhabra of Baran and Pirawa of Jhalawar.

Forests and Habitat:

The highest point in the erstwhile State was close to Todaraisingh in Nimbahera district where the Chittor Hills intersected the area.¹ This area is located close to the Bisalpur Reservoir on River Banas which goes on to flow past the city of Tonk. Chhabra is located along the banks of the Parbati while Sironj along the Vindhyan Ridge. Pirawa, Chhabra and Sironj had similar dense vegetation¹ while in Nimbahera forests were restricted to the high hills of Chandsen and Todaraisingh.⁷ Aligarh and Tonk were devoid of any forest with scrub forest restricted to the low hills. For the convenience of this study, Aligarh, Tonk and Nimbahera will be here on collectively referred to as the ‘western districts’ while Chhabra, Pirawa and Sironj as the ‘eastern districts’.



Map 17. A 1930 forest cover map of Tonk District depicting locations with confirmed historical presence of tigers.

Wildlife:

The only well preserved areas of the State were either the Shikargahs or the Zakhira Khas, the latter being an area near Tonk reserved for supply of grass to the State cavalry.⁵ Small game of the plains was found in the dry districts while sambar, wild pig and leopards were found in the hills.⁷ Chital were found in parts of Nimbahera and in the three eastern districts.¹

Protection:

Attempts were made to establish a Forest Department in Tonk as early as in 1885.³ By 1889, prohibitions were imposed on hunting in areas demarcated as Nawab Muhammad Ibrahim Ali Khan's (1867-1930) private shooting areas (Table 15.1).²

Table 15.1 Areas reserved for shooting by Nawab Muhammad Ibrahim Ali Khan, 1889

Name of Pargana	Village	Northern limit	Eastern limit	Western limit	Southern limit
Tonk	Tonk City	Jam Baz Tank and Kana ki Kui	Up to Jaipur Road	Bahimka Mohalla	Rassia Hill
Tonk	Sohela	Barooni Village	Up to villages of Bhanehi and Khera and border of Pirana	Up to Niwai via Jaboria Road, Jaola and Hadi Kalan	River Banas and Bore Khandi Village
Tonk	Sandhera				
Tonk	Kabra				
Aligarh	From village of Kurwaria to Amli- in the large tract of hilly land between villages of Amli, Malapura, Kurwaria, Shahpura Khurd and Kalan. The nulla running on the north and east of Kurwaria and through that village and bit of land which belongs to Seedri Malian; Villages of Gothra and Banetha				
Nimbahera	Villages Kanauj, Bari and Armanda				
Chabra	Villages Pilidha, Bali, Nagda, Googore, Barooni, Saterera Par				
Pirawa	Mathaniya, Hanotiya-Dubaliya and Sagrari				
Sironj	Whole Pargana				

In 1901, the first set of Game Rules for the State were published, prohibiting killing, catching or injuring a bird or animal within the protected area except for wild pig.⁵ Around this time the entire forested area of the State covered 275 sq. km.¹ In 1943, the Tonk Forest Act came into effect for demarcation, settlement and proper management of the teak forests of the eastern districts.⁵

Distribution of the Tiger:

The nizamats of Pirawa adjoining Jhalawar; Chhabra in the neighbourhood of Kota State Forest and Sironj in Central India used to have many tigers.⁴ Even Nimbahera with a part of Chittor Hills abutting it and Tonk on the banks of the Banas had tigers until as recently as the 1950s.⁵ Between 1870 and 1970, about 50-60 tigers were shot in the three western districts of Tonk.⁹ During the same period, more than 800 individuals were shot in the eastern districts.⁹ Michael Van Ingen, member of the famous taxidermist family of Mysore, believes the highest number of tiger skins that came to their factory from any part of Rajasthan were from Tonk. He remembers the figure being close to 600.⁸

In the western districts, places famous for the tiger were Amli and Bhanwar Kho.⁹ Between 1940 and 1950, one pair of tigers spent a night in the garden of the Khalil Club, then on the outskirts of the city.⁹ They even made a buffalo kill, fed on it partially and left the next day.⁹

In the Bisalpur area of Nimbahera, in 1955-56, one man eater and one cattle-lifter tiger were shot, indicating the presence of the species.⁵ In Todaraisingh, permission to shoot up to two tigers per year was obtainable even in the mid 1960s⁵- a count derived from the carrying capacity of the area-which perhaps can be interpreted to mean, a reasonable population of the species existed in the area.

There were many permanent shooting boxes or 'odi' in Amli area which was connected to Indergarh and present day Ranthambhore.⁹ Some of the known odis at Amli were Barwala Mala, Hathileva Mala, Mallapura Mala, Neemwala, Bhaatpura and Maidanwala mala.⁹ All of them had artificial waterholes many of which were regularly filled with water particularly in the summer months.⁹ In 1983, Captain Sahibzada Shamsher Khan saw his last tiger at Amli.

The eastern districts had dense teak (*Tectona grandis*) and dhok (*Anogeissus pendula*) vegetation along with high prey base. These were the main areas for tiger hunting in Tonk. Some of the famous places for tigers in this region were:

- a. Chhabra- the Kota-Bina railway line divides the forest west of River Parbati into 'Agwara' and 'Picchwara' areas.⁶ The junction where the north-west sloping terrain of the 'Agwara' region drains into River Parwati, many small islands get formed. These islands called 'sundas' supported excellent forests in the past.⁶ The 'Picchwara' region has horse-shoe shaped range of hills which rise to an elevation of less than 500 metres and supported good forest. Both these areas had a large tiger population.

Table 15.2 Names of hankas or shooting preserves in the Chhabra Range where the Nawab of Tonk had exclusive shooting rights until the 1960s.⁶

Forest Block	Places within the block
Dilod	Kunjiwala, Lambisundi Gauhriwala, Kherli sunda, Sheokhapur (Imliwala sunda), Anandpura (Sheikha wala, Ghatore wala, Bugle wala)
Gugore	Phatidant and Gagaiya Retghata, Mahtawala Bara sunda
Lapakna	Whole jungle
Tutibarri	Hinglot and Bhilwala

Until 1960s, the Forest Department was proposing opening some other areas in the Chhabra Range (which were not exclusively reserved for the Nawab of Tonk) for shooting to public in order to increase revenue through hunting by sportsmen.⁶ Some of the proposed places were in the shooting blocks of Kotrapur, Mohammadpura, Ghatta, Karaiahath, Nagda and Patna.⁶

- b. Pirawa- located in the rugged Malwa region, this area is intersected by a network of streams that flow into the Chambal. Even in the 1960s, Gelani, Kyasra and Dug had 'big game' and blocks such as Silehgarh, Khadagpura, Tulsia Bhawani and Chokari along with Gelani and Kyasra were open to shooting by public.³ Up to one tiger could be shot per year in the shooting blocks of Silegarh and Kyasra.³
- c. Sironj - Located in Madhya Pradesh at about 400 kilometres from Tonk, Sironj may have been far to

travel to in the early 19th century. Hence, it seems Pirawa and Chhabra were the more popular places for shooting tigers. Within Sironj, Lateri was the main tiger hunting area with many shikargahs.⁴ Sometimes, despite the distance, important guests would be taken to Sironj for tiger shoots. In December 1930, one such party visiting Chhabra and Sironj shot four tigers between the two places.⁴ Similarly, in February 1933, a party consisting of Captain Poulton, then the Political Agent of Harauti and Tonk and the Nawab of Tonk shot 12 tigers in 21 days at Sironj and Chhabra.⁴

The fifth Nawab of Tonk, Nawab Saadat Ali Khan, in his lifetime shot 330 tigers, the highest figure for Tonk, followed by 130 shot by Nawab Ismail Ali Khan and 120 by Nawab Ibrahim Ali Khan.⁹ Sahibzada Abdul Shakoore Khan had shot 47 tigers by the time he was 43 years of age along with 158 panthers and 71 bear.⁴ He shot extensively in Chhabra and often received invites from the principalities of Indergarh, Amargarh, Balwan and Jhalawar. He closed his account at 105 while Sahibzada Ilyas Khan shot about 12 tigers.⁹

Decline of the Tiger and Other Wildlife:

While forests of Aligarh and Tonk nizamats were neglected even before independence,⁵ those of Chhabra and Pirawa suffered extensively after the merger of States.⁹ These were areas with shikargahs of the Nawabs of Tonk and were always well preserved with strict rules ensuring protection of forests and wildlife. However, immediately after the merger of states, large forested areas were encroached upon all across the forested parts of Tonk territory.⁹ This was especially true for Pirawa.³ Forests in this region were cleared as part of the 'grow more food campaign.'³ At the same time, shooting permits were being issued freely. This led to uncontrolled decimation of wildlife. The newly formed Forest Department further weakened the case for wildlife protection by channelizing most of its energy towards raising revenue through timber extraction. With wildlife protection low on everybody's agenda, most wildlife from these forests got killed. Today none of these areas support any tiger. Even species such as wild dog which were common in the eastern districts particularly Chhabra⁴ disappeared.

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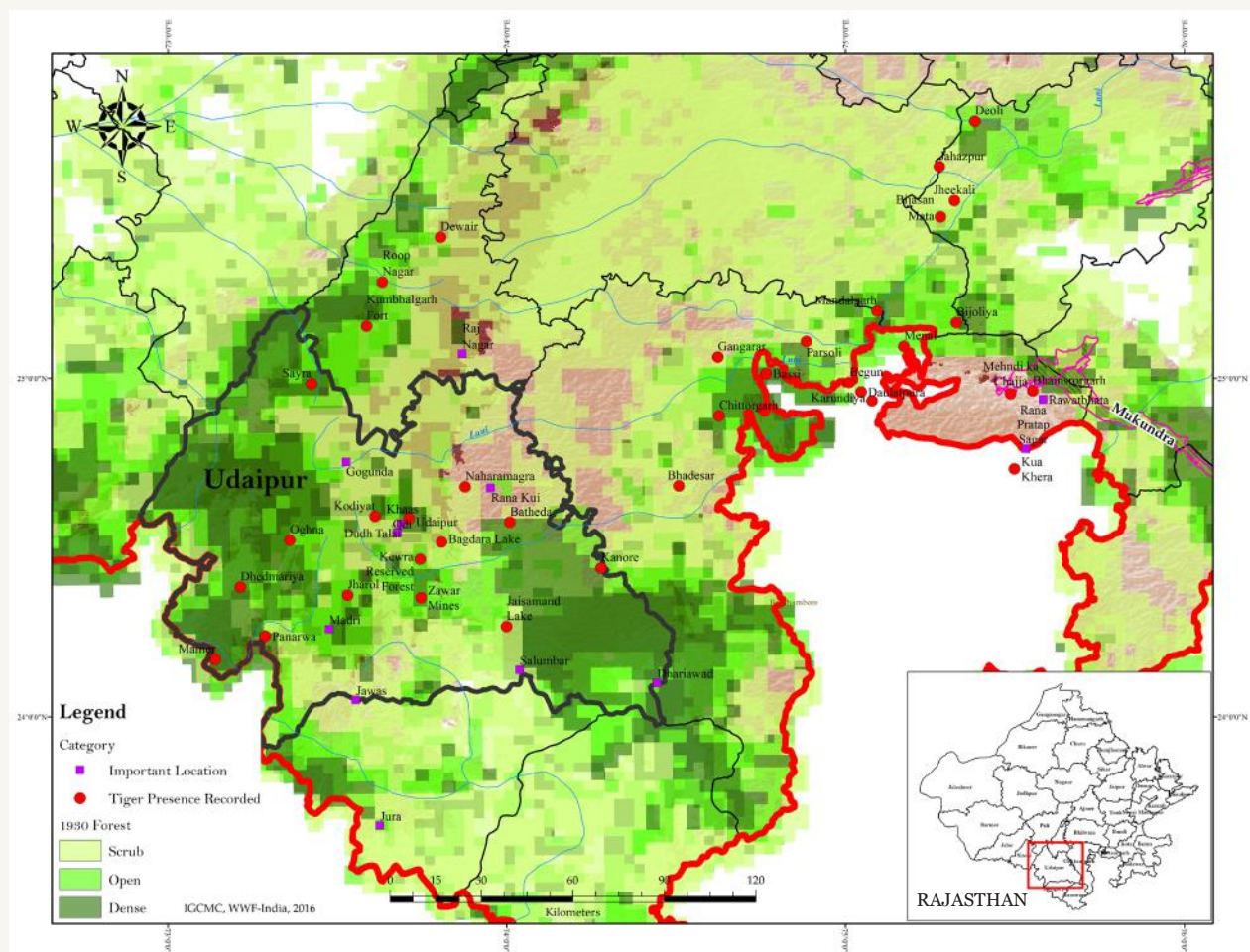
18. Udaipur (Mewar)

Located in south-central Rajasthan was the erstwhile State of Mewar with Udaipur as its capital. To the west, it was separated from the former States of Marwar and Sirohi by the Aravalli Range of Hills while to the southwest were located the States of Dungarpur and Idar. Hadoti was located on the eastern side while to its south were the Vagad States.

Generally erstwhile Mewar can be divided into three parts: the northern plateau, western and south-western Aravallis and the eastern plains. Kumbhalgarh at an elevation of approximately 1100 metres is the highest point in the region.⁵ Banas is an important river, originating in the Khamnor Hills near Kumbhalgarh and finally joining the Chambal. In the southeast, Jakkum is another important river that rises within the erstwhile State and joins River Som.⁵

Forests:

Mewar had one of the largest forested areas in erstwhile Rajputana covering around 12000 sq. km. in the early 1900s, constituting one third of the total land area under the State.² These forests occupied three main zones:



Map 18. A 1930 forest cover map of Udaipur District depicting locations with confirmed historical presence of tigers.

- a. Around 6000 sq. km. of the forested area was found along the western chain of Aravallis forming Mewar's administrative boundary with Marwar, Sirohi and Idar.² While some forested area around Kumbhalgarh and Sayra was reserved, rest came under the control of the chieftains of Gogunda, Jharol, Oghna, Panarwa, Jura, Madri and Jawas.² Areas along Sirohi-Dungarpur border⁵ and around Oghna-Panarwa had dense forest.⁹
- b. Next forest block in the southeast part covered an area of 1970 sq. km. with 13 sq. km. reserved around Jaisamand.² This forest patch included areas around Salumbar, Bassi and Dhariawad,² close to the border with Banswara and Pratapgarh and contained the most valuable timber in the State.⁵
- c. Remaining forest covered around 3600 sq. km. and included forests of Chittorgarh, Mandalgarh, Bhainsrorgarh, Begun, Bijolia and Jahazpur.² Only 40 sq. km. of the forest was reserved in this region.² Vegetation in this zone largely comprised of poor quality trees which characterise semi-arid regions and discontinuous forest.² However, this was also the region with the largest population of tigers within the erstwhile State.^{15, 16}

Common trees found in the Aravallis included *Anogeissus pendula*, *Boswellia serrata*, *Terminalia bellirica* while other species such as *Adina cordifolia*, *Acacia catechu*, *Madhuca longifolia*, *Dalbergia sissoo*, *Butea* sp. occupied large landscapes.² *Syzygium* sp. and *Phoenix sylvestris* were found in areas with water such as stream beds. Bamboo was common throughout the forested parts of the Aravallis.

Reserved forests were strictly protected mostly for hunting purposes.² Rest of the forested area was under direct supervision of the local chiefs and was commonly used for grazing purpose. On the south-western side of the State, large areas were clear felled by the early 1900s as a result of shifting cultivation locally called 'walar', practiced by the Bhil community.²

Wildlife:

With vast forest cover and a range of habitat types, this region supported a diversity of species which ranged from large carnivores such as the tiger, leopard, sloth bear, wolf, hyena, wild dog and included herbivores such as sambar, chital, four-horned antelope, chinkara, blackbuck, nilgai and wild pig amongst others.² While the tiger was found in some parts of the State, leopards were much more common.² Pig sticking and shooting of pigs were popular forms of recreation practiced by members of the ruling class.³ During February-March, a local festival was celebrated by the ruler and his vassal chiefs, which involved communal hunt of wild pigs.¹⁴

Wild pigs were protected, especially around the capital city of Udaipur,^{3, 16, 17} primarily to provide easy recreation for the Maharana when he wanted to indulge in sport hunting. Nahara Magra located around 20 kilometres from the capital had several permanent shooting boxes erected to allow for pig shooting.¹⁸ While the hills around it were covered in thick forest, it also had some famous grassland preserves 'beeds' for wild pigs such as Bara and Rana Kui where pig-sticking would be held.²

The State also maintained a deer park and a menagerie.⁵ During the reign of Maharana Fateh Singh (1884-1930), Udaipur had a menagerie with lions from Gujarat and tigers obtained from an auction by the ruler of Oudh. It also had leopards and sloth bear.⁵ These animals would often be pitted against each other, resulting in deadly encounters. The Khaas Odi was one of the venues for such encounters. A sculptor of a tiger and wild pig fighting, located at the Dudh Talai Park on the slopes of Machla Magra is a reminiscence of the royal entertainment.³

Around the capital city, shooting boxes stuck out from the hills.⁵ Wild pigs were often provisioned around

certain shooting boxes to allow for easy game in case of visits by important guests or for the ruler. The Khaas Odi and Dhimra Bagh at Jaisamand were important venues for special guests to hunt wild pigs.³ Tigers, leopards and wild pigs were much sought after game animals.

Wildlife and Forest Laws:

Reserved forests were strictly protected in Mewar and covered an area of 200 sq. km.² These were preserved primarily for shooting purpose and hunting in them was restricted to the Maharana and his guests. Tiger was the royal quarry with hunting access only to the ruler. This was especially so during the reign of Maharana Fateh Singh. Maharana Fateh Singh usually gave no permission to hunt tigers⁴ and by 1898 while he had killed 49 tigers, maximum tigers hunted by the important nobles accompanying him on his shooting journeys was only one.³ The ruler usually spared females and young animals.¹⁷ Given his great interest in hunting, he built shooting boxes and promoted preservation of forests.⁴

A 1927 order (No. 21746) reinstated the royal hegemony over the tiger and prohibited anyone other than the Maharana from hunting tigers in Mewar. In case of a man-eater, special permission was given sometimes, but in most cases it reserved the rights to hunt the animal for the ruler or a special huntsmen or shikari.¹⁷ Even important noblemen of the State were not allowed to shoot tigers and punishment for offenders could be as severe as losing revenue villages under their command.¹⁷

Hunting was prohibited during the months of Sravana, Vaisakha and Kartika for religious reasons and during Chaitra and Vaisakha- breeding season for most animals.¹⁷ Similarly, days such as full moon and 11th day of the lunar calendar ('Ekadasi') were considered auspicious and hence no animal could be hunted on those days.¹⁷

Distribution of the Tiger:

Tigers were found in the forested parts of Mewar and although literature varies between calling them plentiful¹³ to not so common,² they did exist. James Todd made a mention of them in 1832 saying there were many tigers and boars in Mewar and also mentioned of them being found in the capital city.¹⁴ In Mewar, the tiger was called 'Sunhari Sher' while the leopard, 'Adhveshara'. We derive information on past distribution of tigers through various sources which include historical documents, paintings, records from shooting diaries and information derived from books on sport hunting. A painting in the personal collection of Shri Vijai Singh Bedla, depicts Maharana Fateh Singh accompanied by several others posing with a trophy of a dead man-eating tiger with Chittorgarh Fort in the background, indicating presence of tigers in that area. In 1888, Maharana Fateh Singh restored Nahar Odi to commemorate the place where Maharana Jagat Singh II (1734-1751) shot a tiger, another indicator of presence of tigers in the vicinity of the city of Udaipur.

Maharana Fateh Singh allowed himself few distractions from his rigid administrative duties, tiger hunting being one.⁴ As per records he killed 375 tigers; 991 leopards and 990 wild pigs during his reign of 46 years.³ On only three or four occasions he travelled outside his state of Mewar for the purpose of hunting, last one being a trip to Jodhpur for wild pigs in 1892.³ One possible reason for his limited visits to other states was to ensure he was under no obligation to permit guests hunting on his land. Some writers attribute over 1000 tigers to Maharana Fateh Singh during his lifetime¹⁰; although, these figures may be exaggerated. However, in most likelihood, all tigers hunted by him, were shot within the administrative boundaries of Mewar. His keen interest in hunting resulted in him ensuring that the royal game was preserved exclusively for the ruler. This meant strict forest laws and self-restraint when it came to hunting females or immature tigers. ^{13, 17} Heliographs were regularly used to communicate locations of

tigers¹⁶ and even in case of man-eating or habitual cattle-lifting tigers; the right to hunt the animal was almost exclusively restricted to the ruler or a specially appointed shikari.¹⁷

Some of Maharana Fateh Singh's favourite hunting grounds were Kumbhalgarh, Chittorgarh and Nahra Magra.¹⁷ Tigers were usually hunted from shooting boxes with beats conducted with elephants were also used to pursue them. Udaipur had special shooting howdahs for elephants while tiger trackers were given much importance with some rare cases when jagirs were given as rewards for excellence at work.⁸ Mande was a special rope device used as a machaan, the art of which was passed on by Maharana Fateh Singh to Maharaja Madhav Rao Scindia II, during his visit to Udaipur.³

Based on hunting accounts, tiger distribution in the State closely followed the forested areas:

- a. Around Kumbhalgarh: This region included the forests of Dewair, Kumbhalgarh, Sayra and Roopnagar. One to two tigers were shot in Dewair each year although the ruler did not visit the place much.¹⁷ A shooting camp was held at least once in two years in Kumbhalgarh.¹⁷
- b. Panarwa and Oghna area: This region included forests of Jura, Oghna, Panarwa and areas around. The chiefs of these vassals were directly under the British until 1930 and did not acknowledge allegiance to Mewar.¹² This remote region was predominantly occupied by Bhil and Garasiya tribal communities. A detailed study on biodiversity conducted by Dr. Satish K. Sharma is our main source of information for the region. In his study he mentions of several locations such as Nahar ka Bhagda near Bhildi Mata in Phulwari Block; Nal Mukhi and Dodawali forests; and other sites such as Ubheshwar and Kamalnath Temples around Phulwari ki Naal, which were used by tigers. Phulwari ki Naal Valley near Bhildi Mata was a popular site for tiger shoots in which rulers of erstwhile Dungarpur participated.⁹ The region lacked shooting boxes or permanent machaans and hence temporary machaans would be erected and beats conducted to drive out tigers.⁹
- c. Chittorgarh: Kua Khera was an important location in this region where according to one report 32 tigers were shot in one month.²⁰ Jawada village near Kuakhera was a popular place for hunting tigers.⁷ Daulatpura camp, located around 20 kilometres north of Chittorgarh was another important camp location.¹³
- d. Bhilwara: Mandalgarh was an important tiger hunting ground in this area. Tigers were found along the Banas and southeast of Mandalgarh with reports of them being hunted in the area as early as 1865.¹
- e. Bhainsrorgarh, Begun and Bassi: Bhainsrorgarh is located close to the confluence of Rivers Chambal and Brahmani. This area was historically famous for tigers with both James Todd and William Rice referring to the region with respect to tigers.^{6, 14} Located at a distance of around 250 kilometres from Udaipur, in pre-independent India, it took approximately a week to travel to this location from the capital city of Udaipur.¹⁵ However, that did not dissuade the rulers from holding tiger shooting camps in the area two-three times a year.¹⁵ Sial Kundi and Mehndi ka Chajja were famous places that sheltered tigers on the Brahmani River. In 1949 and 1950, Maharana Bhagwat Singh (1939-1984) shot around six tigers in this area.¹⁵ However, unlike his grandfather he showed little sympathy to sex or age of the animals being hunted.¹⁵ The other important locations in this area with tigers were forests around Begun and Bassi.
- f. Udaipur-Kotra-Jaisamand: Paintings of Maharana Jawan Singh (1828-38) and Maharana Swarup Singh (1842-61) hunting tigers on Tikhalya Magra indicate presence of the tiger in close proximity to Udaipur. Tod mentions of the Nahara Magra and presence of tigers in this area where no unauthorised person could 'dare to hunt.'¹⁴ Southwest of Udaipur, in the Chappan hills are located Zawara mines, apparently an area where the Bhils concealed Maharana Pratap's (1572-97) children

from the Mughals and protected them from tigers and wolves.¹⁴ To the west of this was Jharol, an area known to shelter tigers even in the 1930s.¹⁷ Shri Nirbhay Singh Karjali remembers around four tiger shoots being organised in this area, although he mentions that the lack of road connectivity in the area did not favour it as a popular tiger hunting ground for the ruler. Further southeast of this area is Jaisamand, which did have tigers but they had started to become rare by 1920s¹⁷. Kewra ki Nal and Dhuniwala were popular places for tigers near Jaisamand.⁷ However, this area was popular for leopard shoots.¹³ Magrer near Batheda also had tigers, one of which was shot by Maharana Fateh Singh in the late 1800s.¹⁸

Unlike other princely states in Rajasthan, the rulers of Udaipur did not make attempts at appeasing the British or other rulers by inviting them to hunt on their territories.²¹ The few rulers who visited the State and indulged in hunting included those of Jodhpur and Bikaner,¹³ both deprived of tigers in their own areas. In a fortnight trip to Chittorgarh in 1931, Maharaja Ummaid Singh of Jodhpur shot 13 tigers and one man-eater⁷ while Maharaja Ganga Singh of Bikaner set an unrivalled figure of 10 tigers in 10 days.^{11, 19}

Most cases of tiger hunting within Mewar can be attributed to Mahrana Fateh Singh and his son Mahrana Bhupal Singh who shot seven tigers during a shooting camp at Chittorgarh in 1936.¹³

Table.16.1 Records of tiger sightings or shot between 1885 and 1952

Year	Name of Camp/ Important Village	Shikargah/ Location	Notes
Autumn, 1884 or 1885		Kodiyat	Tiger shot. Although two were marked. Immediately after the coronation of Maharana Fateh Singh ³
April, 1885		Amjhar	Maharana Fateh Singh shot a tiger ³
May, 1885		Hinglajya	Maharana Fateh Singh shot a tiger ³
Around 1901	Udaipur	26 km west of Udaipur in Bhomat's Murwar Hill	Maharana pumped 14 bullets into a tigress ¹³
April 1923	Daulatpura, Chittorgarh	Big tiger in Karudiya Shikar Hill	Maharana Fateh Singh shot the tiger ¹³
1925	Jaisamand	Mugdara ka Khadra Shikargah	News of a tiger ¹³
May 1925	Chittor-Daulatpura	Shikargah Jela ki Dhaar	Maharana Fateh Singh shot the tiger ¹³
May 1925	Udaipur	Around 23 km south of Udaipur at Kewra Village news of a man-eater. Tiger came from west of Kewra and went to Vali Hill.	Miss Dorley, Maharana and Dhabai Amarsingh present for shoot ¹³
1930	Chittorgarh	Close to camp	Maharaja Ummaid Singh shot a tiger
1931	Kua Khera, Chittorgarh	Close by on an island in the Chambal, tiger lived	Maharana Fateh Singh and Maharaja Ummaid Singh went on shoot ¹³

Year	Name of Camp/ Important Village	Shikargah/ Location	Notes
1931	Kua Khera, Chittorgarh	Patloi River Shikargah	Tiger present ¹³
1934	Chittorgarh	Hathni shikargah, 5 miles east of Chittor	Tiger in hanka in which Mahrana Bhupal Singh present ¹³
1936	Chittorgarh	Amjhar Shikargah	Maharana Bhupal Singhji for tiger shoot ¹³
1936	Chittorgarh	Sukhjhar Shikargah	Maharana Bhupal Singh shot a tiger ¹³
	Chittorgarh	Talab at Senva ki Magri	Maharana Fateh Singh went for tiger shoot ¹³
1939	Khaas Village	Under Thikana Kanore	Information on tiger that killed two people ¹³
February 1939	Udaipur	Baghdara Hill- around 28 km from Udaipur	Lord Linlithgow shot tiger ¹³
April 1939	Mandalgarh	Gaiya Nali Shikargah	Maharaja Ganga Singh shot 2 tigers. Shot 9 tigers on this trip ¹³
	Chittorgarh	Bhadesar	Man-eater close to Borad Hill ¹³
	Near Parsoli		News of tiger troubling people ¹³
	Kua Khera, Chittorgarh	Khokhi River	Tiger wounded ¹³
	Jaisamand	Dhunivala Hills	Reports of tiger ¹³
	Mandalgarh	Menal	Mewar Army Officer, Tottenham went there ¹³
1941	Chittorgarh	Bokadiya Shikargah- around 30 km from Chittorgarh	Pair of tigers make buffalo kill ¹³
March 1941		Amjhar Hill	Tiger and tigress sighted ¹³
May 1941	Jahazpur	Chhabaria Village (Ber ki Khaan), 16 km from Devli	Man-eater. Report of two tigers sighted. At Jheekali Village tiger caught one person. Also, news of tiger killing a man at Itunda ka Magra near Deopura ¹³
June 1941	Jahazpur	Near Beri Mata	A pair sighted. Third day tiger killed a man in Deopura ¹³
April 1942	Bijolia, Mandalgarh	Reecha Khoh Ghati	Tiger makes buffalo kill ¹³
February 1942	Chittorgarh	Bokadiya	Went for tiger shoot ¹³
May 1942	Mandalgarh	Menal	Tiger makes buffalo kill ¹³
	Kua Khera, Chittorgarh	Near Javada on an island called Sudi	Wounded tiger ¹³
May 1944	Mandalgarh	Bijasan Mata Temple Hill	Sighted tiger ¹³
In 1940s-50s		Khokhi River	Tiger shot ¹³
March 1945	Jaisamand	Kundaliya Shikargah	Tiger makes buffalo kill
March 1950	Bhainsrorgarh	Adharshila-Siyaliya Kundi	Shot two tigers ¹³
April 1952	Kua Khera, Chittorgarh		Reports of a man-eater ¹³

Table 16.2 Record of tigers hunted by Maharaja Ganga Singh of Bikaner in Mewar State

Date	Location	Sex and No. of tigers shot
16 January 1938	Jaisamand: Gamdhar ¹¹ or Ganghar ¹³	Male ¹⁹
17 January 1938	Jaisamand: Tikhio Beat	Female ¹⁹
14 April 1938	Khokhi	Female ¹⁹
15 April 1938	Patloi	Male+Female ^{19,11}
16 April 1938	Bokadio	Female ¹¹
19 April 1938	Patloi	Male ¹⁹
20 April 1938	Bokadio	Female ¹⁹
22 March 1939	Chittorgarh	Male ¹¹
23 March 1939	Chittorgarh	Male ¹¹
25 March 1939	Bokadio	Male+Female ¹¹
26 March 1939	Bhanwar Karayan	Male-2 ¹¹
27 March 1939	Tolejhar	Female ¹¹
28 March 1939	Mandalgarh	Males ¹¹
30 March 1939	Mandalgarh	Female ¹¹
31 March 1939	Bokadio	Female ¹¹
28 April 1940	Reencha Khoh and Peeple Jhor	Male+Female ¹¹
30 April 1940	Hathni Khoh and Dorai	Male+Female ¹¹
4 May 1940	Khokhi	Female ¹¹
15 April 1941	Khokhi	Male ¹¹
5 January 1942	Mandalgarh	Male ¹¹
6 January 1942	Mandalgarh	Female-3 ¹¹
7 January 1942	Mandalgarh	Female ¹¹
8 January 1942	Mandalgarh	Male ¹¹
11 January 1942	Mandalgarh	Female ¹¹

Table 16.3 This table has been obtained from ‘Study of Biodiversity and Ethnobiology of Phulwari Wildlife Sanctuary, Udaipur (Rajasthan). Vol.11’ by Sharma, S.K. 2007. PhD. Thesis submitted to Mohanlal Sukhadia University, Udaipur.

Year of Record	Nature of Record	Source
1943-44	Shot by Rana Mohabbat Singh (21st Rana of erstwhile Panarwa State) near Jogan Mata	Rana Manohar Singh-pers com. (22nd Rana of Panarwa) ⁹
1952	DFO Udaipur wrote to A.K. Tehsin (father of Dr. Raza H. Tehsin) to know his willingness to shoot a man-eater of Oghna forests.	DFO Udaipur D.O. Letter no. C/1661 dated 22.9 1952 ⁹
1962	Tiger frequently seen at Mamer forests	Rao H.S. Solanki ⁹
Till 1950	Tigers were present in Panarwa and Dedhmariya Forest Blocks	Rana Manohar Singh Solanki ⁹
Till 1950	Oghna, Ramkunda, Ladan forest area	Rana Manohar Singh Solanki ⁹
Around 1960	Abdul Ajij bhai Faujdar, a police officer of erstwhile Juda State presently living in Kotra, made available an old black and white photo of a man-eater tiger shot by himself, with help of officials of Forest Department. This tiger was shot in Dedhmariya Forest Block. Many children are visible in the photo- now they all are old men. They are Bashar Khan Sandmariya, 2 unknown forest guards, Heera Puri Goswami Dy. R.O., Abdul Ajij bhai Faujdar, Kotra, Hafij Khan s/o Faujdar Saab, Habdul bhai Khan Kotra, Nijamuddin Kotra, 2 more unknown forest guards.	The black and white photograph was made available by Shri Abdul Ajij bhai Faujdar who lives in Kotra. Ajij bhai is a very old man (completed 100 years already). ⁹

Decline of the Tiger and Other Wildlife:

Mewar's widespread forest and wildlife were strongly protected especially during the reign of Maharana Fateh Singh.^{13, 16, 17} Given his interest in hunting, he protected forests of Mewar zealously, especially the tiger and wild pig.¹³ This meant wildlife was found in large numbers across the State. In 1921, Udaipur faced a social unrest, primarily due to economic hardships and rigid autocracy. Apart from high taxation, inflation and poverty, some of the other reasons for the uprising included, forced free labour during shikar camps, rigid game laws and uncontrolled crop-raiding by protected herbivores.³ The revolt led to mass violation of forest laws in royal preserves such as the Nahara Magra and Kamlod ka Magra.³ The ruler attributed these changes in attitude of local people to the political environment of the country.³ By 1930s, Mewar was facing multiple complaints against big cats one of which from Bhilwara in 1938 was against tigers that had killed at least two men and 900 cattle.³ These complaints were followed up by further complaints of inaction against a problem tiger.³ Similarly, from Rajnagar in Rajsamand, people complained against problem leopards.³

By the 20th century, tigers were no longer found in close proximity to Udaipur although leopards and pigs were plentiful in places such as Tikhalya Magra and outside the capital city.^{16, 17, 18} In 1947, a rare tiger could be encountered in Jaisamand while leopards were still common and as many as four were shot during the Christmas Shooting Camp held that year.³

In 1949-50, Shri Nirbhay Singh Karjali saw a tigress with two cubs in the forest near Roopnagar in Kumbhalgarh. He was a frequent visitor to this forest and had seen tigers on four occasions in this forest,

the last being in 1958. Around the same time, tigresses with cubs could still be seen at places such as Mehndi ka Chajja in Bhainsrorgarh.¹⁷ Soon after, tigers began to disappear. Last sightings of tigers from areas around Gangrar near Chittorgarh were reported in the 1960s.¹⁶ Kua Khera still had tigers in 1964-65 with the last sighting in this area being in the early 1970s.^{16, 17} Around the same time Phulwari ki Naal lost out on its population of tigers.⁹ By this time, the extinction of the tiger from Mewar was certain with an estimated population of around 10 individuals in forests around Bijolia, Begun, Daultapura adjoining Chittorgarh and some in Mandalgarh and Jahazpur area of Bhilawara.⁷

One of the last places in Mewar to have had tigers was the area around Bhainsrorgarh. The last annual royal tiger shoot was held here in 1970 while the last pair of tigers was sighted in 1967.¹⁵ Post 1974, no tiger was sighted in the famous tiger forest of Bhainsrorgarh while the last to be sighted in Javada Forest Range was in 1975.¹⁵

The 1970s gave a massive blow to wildlife in this part of Rajasthan. The once contiguous forest between Kua Khera and the erstwhile State of Gwalior was rapidly fragmenting. Same was the case with the forest of Mandalgarh and its connectivity with forests of Bundi. To further worsen matters, between 1965 and 1969, the region suffered a drought with huge losses to wildlife.¹⁶ When the rains finally came, farmers showed little or no tolerance to wild pigs raiding crop. The species was hunted in large numbers as a consequence.¹⁶

This was also the period when townships such as Rawatbhata came up, creating a demand for milk and milk products. This resulted in increased grazing pressures on the already disappearing forests. Shri Rajveer Singh believes an important reason for decimation of forests around Bhainsrorgarh was excessive grazing and demand for firewood, which was needed in large quantities to prepare a local delicacy called, 'mawa' which requires long hours of cooking – in this case using firewood from the neighbouring forest. At the same time, demand for local stone from the newly established town of Rawatbhata and an expanding city of Kota increased.¹⁵ This resulted in immigration of outside labour which had little regard for forest and wildlife reservations and exerted high pressure on both wildlife and forest.¹⁵

Grassland specialists suffered extensively across the region due to the newly implemented policy of land ceiling.^{15, 21} This resulted in a break-down of large land holdings that were usually used for grazing and not intensively cultivated providing habitat for wildlife. Chinkara was one such species that almost vanished from large parts of the region. The Kala Khet 'beed' near Bhainsrorgarh was one such grassland that lost out on wildlife due to loss of habitat.¹⁵ In 1865, bustards could be seen in groups of up to 19 in an area close to the Banas,¹ south-east of Mandalgarh, but these also vanished. The 1971-72, the Brahmani River hosted species such as the gharial and the mahaseer, but social and political changes dealt a blow not just to the tiger but also to other wildlife found in the region.¹⁵

Recent years have seen a revival of forest in some parts of the region such as the area around Gangrar and return of species such as wild pigs, nilgai and even leopard,¹⁶ however, the tiger is probably gone from this region forever.

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15. Information based on interview with Shri Rajveer Singh at Bhainsrorgarh in October 2014.
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17. Information based on interview with Shri Nirbhay Singh Karjali at Udaipur in September 2014.
18. Information based on interview with Shri Kamalendra Singh at Udaipur in September 2014.
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20. Information based on interview with Shri MK Ranjitsinghji at Delhi in August 2014.
21. Information based on interview with Shri Raghav Raj Singh Shivrati at Udaipur in September 2014.

Appendix

Common names of some plant species mentioned in the report

Latin Name	Common Local Name
<i>Acacia catechu</i>	Khair
<i>Acacia nilotica</i>	Babool
<i>Adina cordifolia</i>	Haldu
<i>Albizia lebbbeck</i>	Kala Siris
<i>Anogeissus pendula</i>	Dhok
<i>Anthocephalus cadamba</i>	Kadamb
<i>Apluda mutica</i>	Tachula, Bhongta
<i>Aristida depressa</i>	Lapla
<i>Azadirachta indica</i>	Neem
<i>Bauhinia racemosa</i>	Jhinjha
<i>Boswellia serrata</i>	Salar
<i>Buchanania lanzan</i>	Char, Chironji
<i>Butea monosperma</i>	Palash, Cheela
<i>Carissa spinarum</i>	Karonda
<i>Dalbergia latifolia</i>	Phasi
<i>Dalbergia sissoo</i>	Shisham
<i>Dendrocalamus strictus</i>	Bans
<i>Diospyros melanoxylon</i>	Abnus, Tendu
<i>Emblica officinalis</i>	Aonla
<i>Euphorbia caducifolia</i>	Thor
<i>Ficus sp.</i>	Bad, Bargat, Peepal, Anjeer, etc.
<i>Lannea coromandelica</i>	Gurjan
<i>Madhuca longifolia</i>	Mahua
<i>Mangifera indica</i>	Aam
<i>Mitragyna parvifolia</i>	Kadamb
<i>Phoenix sylvestris</i>	Khajoor
<i>Prosopis cineraria</i>	Khejri
<i>Prosopis juliflora</i>	Vilayati babool
<i>Saccharum munja</i>	Moonj ghaas
<i>Salvadora sp.</i>	Jaal
<i>Santalum album</i>	Chandan
<i>Sterculia urens</i>	Kadaya
<i>Syzygium cumini</i>	Jamun
<i>Tamarindus indica</i>	Imli
<i>Tectona grandis</i>	Sagwaan
<i>Terminalia bellirica</i>	Baheda
<i>Vitex trifolia</i>	Nichinda
<i>Ziziphus sp.</i>	Ber

