

A Review on Fauna in National Parks of Hyderabad

Narsaiah Shivakoti

Department of Zoology, Government Degree College, Ibrahimpatnam, Rangareddy,
Telangana State, India

Email: drsnr.shivkoti@yahoo.com

ABSTRACT

The conservation of biodiversity is the primary objective of protected areas, such as national parks and sanctuaries. Ecosystems must be stable and healthy to provide essential ecosystem services such as nutrient cycling, climate regulation, air and water purification, and pollination. Our economy and the intrinsic value of species and ecosystems depend on the conservation of biodiversity. National park vegetation protects biodiversity and provides us with clean water, purified air, and other necessities. IUCN defines national parks as areas managed for ecosystem protection and recreation. The first national park in India was established in 1936. In Uttarakhand, it is now known as Jim Corbett National Park. There are 106 national parks in India, three of which are located in Hyderabad, the capital of Telangana, namely Mahavir Harina Vanasthali, Mrugavani, and Kasu Brahmananda Reddy National Parks. Current research is a comparative analysis of these parks' geographical structure, faunal diversity, and population dynamics. Upon observing the physical geography of the three parks, it is discerned that they are situated within a 20-kilometer radius and share similar conditions despite having various surface areas. Mahaveer harina vanasthali is the greatest of the three parks, followed by Mrugavani and KBR national parks. The number of birds and diversity of birds in the three parks is greater than that of reptiles and mammals. Regarding the population dynamics of the three parks over the past four years, the populations of spotted deer, black buck, four-horned antelope, and peafowl have increased in Mahaveer Harina Vansthal, spotted and sambar deer in Mrugavani, and peafowl in (2 years) KBR national park.

Key words - Fauna, National parks, Hyderabad, Biodiversity, Conservation

INTRODUCTION

A national park is a protected location maintained by the government to preserve ecosystems and promote recreation and education. Under the provisions of CHAPTER IV of the Wilderness Preservation Act of 1972, no human activity is permitted within the national park unless authorized by the state's Chief Wildlife Warden. The primary objective of national parks is biodiversity conservation (Bruner et al., 2001; Willkie et al., 2008).

Additionally, it protects the ecosystem from industrialization and pollution and provides animals with a safe habitat. National Parks protect approximately 247 imperiled or endangered plant and animal species. Pollination, nutrient cycling, climate regulation, and the purification of air and water are all advantages of biodiversity conservation. It is impossible to exaggerate the significance of biodiversity conservation to our economy and our values. Yellowstone National Park was the first national park in the United States and the first

national park in the world when it was established in 1872. 23 percent of the world's total protected area is occupied by national parks. (S.chape, et. al, 2003).

There are approximately 3900 national parks in the world, covering nearly 4.5 million square kilometers, and 106 national parks in India, covering 1.35 percent of the country's land area (National Wildlife Database, January 2023). The network of Protected Areas in India comprises 4.9% of the country's land area (102 national parks, 515 wildlife sanctuaries, 47 conservation reserves, and four community reserves; Ministry of Environment & Forests, 2013).

How to Cite this Article:

Narsaiah Shivakoti. (2023). A Review on Fauna in National Parks of Hyderabad. *Biolife*, 11(2), 79-92.

DOI: <https://dx.doi.org/10.5281/zenodo.7908373>

Received: 26 March 2023; Accepted: 30 April 2023;

Published online: 8 May 2023.

The first national park in India was established in 1936. In Uttarakhand, it is now known as Jim Corbett National Park. Hemis National Park, which comprises nearly 1,700 square kilometers and is located near the Pakistani and Chinese borders, is India's largest national park. South Button Island National Park in the Andaman and Nicobar Islands is the smallest national park in India. As of 5 June 2022, Raimona National Park in Assam, India's 106th national park, is the country's newest national park. Telangana comprises nine wildlife sanctuaries, three national parks, two zoological parks, and a forest area covering 27,292 square kilometers, or 25.19 percent of the state's total area. Three national parks are located in Hyderabad, comprising approximately 5206 acres, which is equal to 2106.79 hectares or 8.522 square kilometers, out of the aforementioned protected areas.

The Hyderabad Forest Division is situated between 16 50' 39" and 17 42' 28" North and 77 21' 49" and 78 49' 2 49" East. The geographical area of the division measures 7 718 52 kilometers. The mean elevation above MSL is 536 meters. This Division contains the twin cities of Hyderabad and Secunderabad, which serve as the state capital. Banjara Hills, measuring 665 meters in height, are the city's highest point. Gradually falling from west to east, the contour level near the Musi River, which flows through the city, creates a trough. This Division's climate is typically dry, with temperatures spanning from 14 to 45 degrees Celsius, and the District's normal precipitation is 786.8 millimeters, the majority of which is caused by southwest monsoons. Granites are present in the Division. The most prevalent soil types are Black cotton, Red, and sandy brown loam. As of the 2011 Census, the population of the Division was 9.30 million. The forest area per person is 0.01 ha, and the density per square kilometer is 1,207. The livestock population is 1.6 million.

Objectives

- To know the faunal diversity of vertebrate classes reptiles, birds, and mammals. of three national parks.
- Comparison of geographical structure and location of three parks.
- Population dynamics of indicator species of national parks.

MATERIAL AND METHODS

In the present study, primary and secondary data have been used for the interpretation of findings from the literature available from books, journals, websites, and key information from respective parks and government departments.

RESULTS

Mahaveer Harina Vanasthali National Park

The Mahavir Harina Vanasthali national park is located in Vanasthalipuram, about 15 kilometers from the city center of Hyderabad, Telangana. On the occasion of Lord Mahavira's 2500th birth anniversary, the park was named Mahavir harina vansthali national park in 1975. It is nearly spread over 189 hectares. The park has varied topography, tropical forests, and dry deciduous forests coexist in harmony. The park's golden and white flowering trees provide a magnificent scene on the lush green lawns during the rainy season. The fauna of these parks mainly endangered Black Buck, migrating birds, cheetahs, Monitor lizards, mongooses, porcupines, Indian hares, jungle cats, black buck, Indian rock pythons, and various snakes. To protect animals and biodiversity, national parks are areas that are legally off-limits for activities such as forestry, poaching/hunting, and grazing on agricultural land.

Table 1: Reptile Fauna of Mahaveer Harina Vanasthali National Park

S.No	Order	Common Name	Scientific Name	
1	Chelonia	Indian black turtle	<i>Melanochelys trijuga</i>	
2		Indian star tortoise	<i>Geochelone elegance</i>	
3	Squamata	Bronze back tree snake	<i>Dendrelaphis tristis</i>	
4		Common kraite	<i>Bangarus caeruleus</i>	
5		Green wine snake	<i>Ahaetulla nasuta</i>	
6		Keeled Indian mabuya	<i>Eutropis macularia</i>	
7		Indian cobra	<i>Naja naja</i>	
8		Indian rock python	<i>Python sebae</i>	
9		Rat snake	<i>Ptyas mucosa</i>	
10		Russel viper	<i>Vipera russelli</i>	
11		Lizards	Bark gecko	<i>Hemidactylus leschenaultii</i>
12			Bengali monitor lizard	<i>Varanus bengalensis</i>
13	Bronze backed skink		<i>Eutropis macularia</i>	
14	Fan throated lizard		<i>Sitana ponticeriana</i>	
15	Monitor lizard		<i>varanus</i>	
16	Oriental garden lizard		<i>Calotis Versicolor</i>	
17	Water monitor		<i>Varanus Salvator</i>	
18	House gecko		<i>Hemidactylus frenatus</i>	
19	Crocodylia	Marsh crocodile	<i>Crocodylus palustris</i>	

Uniqueness: Perfect habitat for the endangered blackbuck in the city of Hyderabad.

Table 2: Avian Fauna of Mahaveer Harina Vanasthali National Park

S.No	Order	Common Name	Scientific Name
1	Galliformes	Indian peafowl	<i>Pavo cristatus</i>
2	Cuculiformes	Brain fever bird	<i>Hierococcyx varius</i>
3		Grey francolin	<i>Francolinus pondicerianus</i>
4		Pied wagtail	<i>Motacilla alba</i>
5	Piciformes	Black ramped flame back	<i>Dinopium benghalense.</i>
6	Accipitriformes	Crescent serpent eagle	<i>Spilornis cheela</i>
7		Vulture	<i>Gyps indicus</i>
8		Short-toed eagle	<i>Cicetus gallicus</i>
9		shikra	<i>Accipiter badius</i>
10	caprimulgiformes	Common Indian night jar	<i>Caprimulgus asiaticus</i>
11	passeriformes	Ashy prinia	<i>Prinia socialis</i>
12		Asian paradise flycatcher	<i>Terpsiphone paradisi</i>
13		Black Drongo	<i>Dicrurus macro cercus</i>
14		Common crow	<i>Corvus splendens</i>
15		Common drongo	<i>Dicruride</i>
16		Common myna	<i>Acridotheres tristis</i>
17		Indian robin	<i>Saxicoloides fulicatus</i>
18		Red-rumped swallow	<i>Hirundo daurica</i>
19		Red-vented bull bull	<i>Pycnonotus cafer</i>
20		Rufous treepie	<i>Dendrocitta vagbunda</i>
21	Aopdiformes	Asian palm swift	<i>Cypsius unicolor</i>
22	Charadriformes	Indian stone curlew	<i>Burhisnus indicus</i>

23		Red wattled lapwing	<i>Vanellus indicus</i>
24	Columbiformes	Eurasian collared dove	<i>Streptopelia decaocto</i>
25		Laughing dove	<i>Streptopelia senegalensis</i>
26		Spotted dove	<i>Streptopelia chinensis</i>
27	Coraciformes	Common Kingfisher	<i>Alcedo atthis</i>
28		Indian roller	<i>Coracias roller</i>
29	Pelecaniformes	egrets	<i>Ardea alba</i>
30		Indian cormorant	<i>Phalacrocorax fuscicollis</i>
31		Indian pond heron	<i>Ardeola grayii</i>
32		Red napped ibis	<i>Pseudibis papillosa</i>
33	Piciformes	Lesser golden-backed woodpecker	<i>Dinopium benghalense</i>
34	Pisttacíformes	Rose ringed parakeet	<i>Pisttacula krameri</i>

Table 3: Mammalian Fauna of Mahaveer Harina Vanasthali National Park

S.No	Order	Common Name	Scientific Name
1	Artiodactyla	Blackbuck	<i>Antilope cervicapra</i>
2		Spotted Deer	<i>Axis axis</i>
3		Wild Boar	<i>Sus scrofa</i>
4	Carnivora	Cheetah	<i>Acionyx jubatus</i>
5		Indian civet	<i>Viverra zibetha</i>
6		Indian leopard	<i>Panthera paradusfusca</i>
7		Indian jackal	<i>Canis aureus indicus</i>
8		Jungle cat	<i>Felis chaus</i>
9		mongoose	<i>Herpestidae</i>
10		Small Indian civet	<i>Viverriculla indica</i>
11	Lagomorpha	Black napped hare	<i>Lepus nigricollis</i>
12	Pholidota	Pangolin	<i>Pholidota.</i>
13		porcupine	<i>Erethizontidae</i>
14	Rodentia	Three-striped palm squirrel	<i>Funambulus palmarum</i>

Murgavani National Park

Mrugavani National Park is located in Hyderabad, Telangana State, India. It is situated at Chilkur in Moinabad Mandal, in between Osman Sagar and Himayat Sagar reservoirs, 20 km from MGBS, and covers an area of 3.6 square kilometers (1.4 sq mi) or 1211 acres. The main objective of this park is the protection & preservation of the natural ecosystem, habitat management, and awareness creation among the public. It is home to 600 different types of plant life. It was declared a National Park in 1998. The climate here is pleasant most of the time. Apart from the varied flora and fauna, the Mrugavani National Park boasts more than 100 species of birds. The topography of the park supports woodlands, grasslands, and rocky areas. Most of the vegetation can be classified as southern tropical dry deciduous forests. (5B/ii) (Champion and Seth,1968) and some areas covered with thorn forests. The average forest density is 0.4. The Park does a significant job of conserving the near-disappearing native flora of the Hyderabad region.

Uniqueness: Unique natural forest with wonderful flora and fauna. Rock formations representing the Deccan plateau are breathtaking. Flagship species of park spotted deer, sambar, and peafowls.

Table 4: Reptile Fauna of Mrugavani National Park

S.No	Order	Common Name	Scientific Name
1	Chelonia	Indian flap shell turtle	<i>Lissemys punctata</i>
2		Indian star tortoise	<i>Geochelone elegans</i>
3		Indian soft-shelled turtle	<i>Nilssonina gangetica</i>
4	Squamata/ Snakes	Banded racer	<i>Argyrogena fasciolata</i>
5		Barred wolf snake	<i>Lycodon striatus</i>
6		Beaked worm snake	<i>Leptotyphlops macrorhynchus</i>
7		Brahminy worm snake	<i>Indotyphlops braminus</i>
8		Checkered keelback	<i>Xenochrophis piscator</i>
9		Cobra	<i>Naja naja</i>
10		Common bronze	<i>Dendrelaphis tristis</i>

		back tree snake	
11		Common krait	<i>Bungarus caeruleus</i>
12		Common kukri snake	<i>Oligodon arnensis</i>
13		Common sand Bova	<i>Erycinae</i>
14		Common trinket snake	<i>Coelognathus helena</i>
15		Common wolf snake	<i>Lycodon aulicus</i>
16		Green wine tree snake	<i>Ahaetulla nasuta.</i>
17		Indian rock python	<i>Python molurus</i>
18		Python	<i>Pythonidae</i>
19		Rat snake	<i>Ptyas mucosa</i>
20		Red sand Bova	<i>Eryx johnii</i>
21		Russel viper	<i>Daboia russelii</i>
22		Saw scaled viper	<i>Echis carinatus</i>
23		Yellow collard wolf snake	<i>Lycodon flavicollis</i>
24	Lizards	Common house gecko	<i>Hemidactylus frenatus</i>
25		Common skinks	<i>Eutropis carinata</i>
26		Fan throated lizard	<i>Sitana ponticeriana</i>
27		Indian chameleon	<i>Chamaeleo zeylanicus</i>
28		Little skink	<i>Scincella lateralis</i>
29		Garden lizard	<i>Calotes versicolor</i>
30		Monitor lizard	<i>Varanus</i>
31		Peninsular rock agama	<i>Psammophilus dorsalis</i>

Table 5: Avian Fauna of Mrugavani National Park

S No	Order	Common Name	Scientific Name	
1	Acciptriformes	Black kite	<i>Milvus migrans</i>	
2		Black-shouldered sunbird	<i>Leptocorma sericea</i>	
3		shikra	<i>Accipiter badius</i>	
4	Anseriformes	Asia Palm swift	<i>Cypsiurus balasiensis</i>	
5		Spot-billed duck	<i>Anas poecilorhyncha</i>	
6	Apodiformes	House swift	<i>Apus nipalensis</i>	
7	Bucerotiformes	Indian grey horn bill	<i>Ocyeros birostris</i>	
8		Black-winged stilt	<i>Himantopus himantopus</i>	
9		Eurasian stone curlew	<i>Burhinus oedicnemus</i>	
10	Charadriformes	Red wattled lapwing	<i>Vanellus indicus</i>	
11		River tern	<i>Sterna aurantia</i>	
12		Small pratincole	<i>Glareola lactea</i>	
13	Columbiformes	Pigeon	<i>Columba livia</i>	
14		Laughing dove	<i>Spilopelia senegalensis</i>	
15	Coraciformes	Common hoopoe	<i>Upupidae</i>	
16		White-throated Kingfisher	<i>Halcyon smyrnensis</i>	
17		Asian koel	<i>Eudynamus scolopaceus</i>	
18		Common hawk cuckoo	<i>Hierococcyx varius</i>	
19		Indian roller	<i>Coracias benghalensis</i>	
20		Pied crested cuckoo	<i>Clamator jacobinus</i>	
21		Grey francolin	<i>Francolinus pondicerianus</i>	
22		Jungle bush quail	<i>Perdicula asiatica</i>	
23		Galiformes	Partridges	<i>Perdix perdix</i>
24			Peacocks	<i>Pavo cristatus</i>
25	Quail		<i>Coturnix coturnix</i>	
26	Rain quail		<i>Coturnix coromandelica</i>	
27	Ashy Prinia	<i>Prinia socialis</i>		
28	Passeriformes	Black drongo	<i>Dicrurus macrocercus</i>	
29		Brahminy starling	<i>Saturnia pagodarum</i>	
30		Common tail bird	<i>Orthotomus sutorius</i>	

31	Passeriformes	Common Lora	<i>Aegithina tiphia</i>
32		Common myna	<i>Acridotheres tristis</i>
33		Common swallow	<i>Hirundo rustica</i>
34		Common wood shrike	<i>Tephrodornis pondicerianus</i>
35		Eurasian golden oriole	<i>Tephrodornis pondicerianus</i>
36		Grey-breasted Prinia	<i>Prinia hodgsonii</i>
37		House crow	<i>Corvus splendens</i>
38		House sparrow	<i>Passer domesticus</i>
39		Jungle crow	<i>Corvus macrorhynchos</i>
40		Indian fan tail	<i>Columba livia</i>
41		Indian pitta	<i>Pitta brachyura</i>
42		Indian robin	<i>Saxicoloides fulicatus</i>
43		Large grey babbler	<i>Turdoides malcolmi</i>
44		Oriental magpie robin	<i>Copsychus saularis</i>
45		Pale-billed flowerpecker	<i>Dicaeum erythrorhynchos</i>
46		Paradise flycatcher	<i>Terpsiphone</i>
47		Purple rumped sunbird	<i>Leptocoma zeylonica</i>
48		Purple Sunbird	<i>Cinnyris asiaticus</i>
49		Red-vented bulbul	<i>Pycnonotus cafer</i>
50		Rufous bellied babbler	<i>Dumetia hyperythra</i>
51		Rufous treepie	<i>Dendrocitta vagabunda</i>
52		Scaly-breasted munia	<i>Lonchura punctulata</i>
53		Thick-billed flowerpecker	<i>Dicaeum agile</i>
54		Tickells flycatcher	<i>Cyornis tickelliae</i>
55		White-browed Wagtail	<i>Motacilla maderaspatensis</i>
56		Yellow-billed babbler	<i>Turdoides affinis</i>
57		Cattle earget	<i>Bubulcus ibis</i>

58	Pelecaniformes	Indian pond heron	<i>Ardeola grayii</i>
59		Red nipped ibis	<i>Pseudibis papillosa</i>
60		Night heron	<i>Nycticorax</i>
61	Piciformes	Coppersmith barbet	<i>Megalaima haemacephala</i>
62	Stigiformes	Indian owl	<i>Bubo bengalensis</i>
63		Spotted owlets	<i>Athene brama</i>
64	Suliformes	Little cormorant	<i>Microcarbo niger</i>

Table 6: Mammalian Fauna of Mrugavani National Park

S.NO	Order	Common Name	Scientific Name
1.	Artiodactyla	Wild boar	<i>Sus scrofa</i>
2.		Civet cat	<i>Paradoxurus hermaphroditus</i>
3.	Carnivora	Indian leopard	<i>Panthera pardus fusca</i>
4		Jackels	<i>Canis aureus</i>
5		Jungle cat	<i>Felis chaus</i>
6		Mongoose	<i>Herpestidae</i>
7	Chiroptera	Indian flying fox	<i>Pteropus giganteus</i>
8		Indian pipistrelle	<i>Pipistrellus coromandra</i>
9	Lagomorpha	Black napped hare	<i>Lepus nigricollis</i>
10		Hares	<i>Lepus</i>
11	Pholidata	Pangolin	<i>Pholidota</i>
12	Primates	Hanuman langur	<i>Semnopithecus entellus</i>
13	Rodentia	Bandicoot rat	<i>Bandicota</i>
14		Five striped squirrel	<i>Funambulus pennanti</i>
15		Indian field mouse	<i>Mus booduga</i>
16		Indian flying squirrel	<i>Petaurista philippensis</i>
17		Indian porcupine	<i>Hystrix indica</i>

Kasu Brahmananda Reddy National Park

The Kasu Brahmananda Reddy National Park is located in Jubilee and Banjara hills in Hyderabad, Telangana, and covers an area of 390 acres. The park was earlier also

known as Chiran Fort Palace. or ‘Jungle amidst the concrete jungle’. This park was initially notified as a “Protected Forest” under Section 24 of the A.P. Forest Act 1967 vide GO. Ms. No.22 Energy & Forest Department dt 3.2.1994 and was named Jubilee Hills Forest Block. It is notified as a national park u/s. 35(4) of the Wildlife (Protection) Act,1972 on December 1998 vide GO.Ms no.187. The park absorbs huge amounts of rainwater and helps to maintain the water table. The park acts as a good carbon sink absorbing carbon dioxide and releasing oxygen. It also serves as a good walking place for morning walkers.

There are around 600 varied species of trees and plants in the KBR park which include sandalwood, teak, neem, etc. KBR park has 133 bird species including peacocks, partridges, quails, owls, Indian roller, and Asian koel. 20 species of butterflies and several invertebrates, 20 reptiles like Cobra, Python, Russell Viper, Lizards, and 20 mammals including Hares, Porcupines, Civet cats, Jungle cats, Jackals, and Pangolin. The vegetation that exists in this area is described as Southern Tropical Dry Deciduous forests (5AC/3) as per Champion and Seth classification. Most of the important tree species local to such forests as Teak, Rosewood, Anogeisus, Lagerstromea, Cassias, Albizias, Accacias, Neem, Zizyphus, Bamboo, Sandal Wood are represented in this park. The shrub layer, which came up, included Ullinta, Dante, Manga, Lantana, Carissa, etc. The ground layer consisted of several species of grass, and herbs, several of which are seasonal.

Uniqueness: The last remaining natural forest ecosystem is situated in the heart of the city encompassing diverse flora and fauna.

Table 7: Reptile Fauna of KBR National Park

S.No	Order	Common Name	Scientific Name
1	Chelonia	Indian Flap Shell Turtle	<i>Lissemys punctata</i>
2		Indian Softshell Turtle	<i>Nilssonina gangetica</i>
3	Squamata	Banded Racer	<i>Argyrogena fasciolata</i>
4		Barred Wolf Snake	<i>Lycodon striatus</i>
5		Beaked Worm Snake	<i>Leptotyphlops macrorhynchus</i>
6		Brahminy Worm Snake	<i>Indotyphlops braminus</i>
7		Bridal Snake	<i>Dryocalamus nympha</i>
8		Checkered Keel Back	<i>Xenochrophis piscator</i>
9		Cobra	<i>Naja naja</i>

10	Common Bronzeback Tree Snake	<i>Dendrelaphis tristis</i>
11	Common Cat Snake	<i>Boiga trigonata</i>
12	Common Kraite	<i>Bungarus caeruleus</i>
13	Common kukri Snake	<i>Oligodon arnensis</i>
14	Common Sand Bova	<i>Gongylophis connicus</i>
15	Common Trinket Snake	<i>Coelognathus helena</i>
16	Common Wolf Snake	<i>Lycodon aulicus</i>
17	Dumerils Black Headed Snake	<i>Sibynophis subpunctatus</i>
18	Green Keel Back	<i>Macropisthodon plumbicolor</i>
19	Indian Rock Python	<i>Python molurus</i>
20	Nagarjuna Sagar Racer	<i>Coluber bhoolanathii</i>
21	Python	<i>Bova bova</i>
22	Rat Snake	<i>Ptyas mucosa</i>
23	Red Rand Bova	<i>Eryx johnii</i>
24	Russells Kukri Snake	<i>Oligodon taeniolatus</i>
25	Russell Viper	<i>Vipera russelli</i>
26	Striped Keel Back	<i>Amphiesma stolatum</i>
27	Yellow Collard Wolf Snake	<i>Lycodon flavicollis</i>
28	Bark Gecko	<i>Hemidactylus leschenaultii</i>
29	Common House Gecko	<i>Hemidactylus frenatus</i>
30	Common Skinks	<i>Scincidae</i>
31	Fan-Throated Lizard	<i>Sitana ponticeriana</i>
32	Indian Chameleon	<i>Chamaeleo zeylanicus</i>
33	Indian Skink	<i>Eutropis carinata</i>
34	Little Skink	<i>Scincella lateralis</i>
35	Lizards	<i>calotes versicolor</i>
36	Monitor Lizard	<i>Varanus</i>
37	Peninsular Rock Agama	<i>Psammophilus dorsalis</i>

Table 8: Avian Fauna of KBR National Park

S.No	Order	Common Name	Scientific Name
1	Acciptriformes	Black kite	Milvus migrans
2		Black-shouldered sunbird	Leptocormas sericea
3		shikra	Accipiter badius
4	Anseriformes	Asia Palm swift	Cypsiurus balasiensis
5	Apodiformes	House swift	Apus nipalensis
6	Bucerotiformes	Indian grey horn bill	Ocyrceros birostris
7		Black-winged stilt	Himantopus himantopus
8		Eurasian stone curlew	Burhinus oedicephalus
9	Charadriiformes	Red wattled lapwing	Vanellus indicus
10		River tern	Sterna aurantia
11		Small pratincole	Glareola lactea
12	Columbiformes	Pigeon	Columba livia
13		Eurasian collard dove	Streptopelia decaocto
14		Laughing dove	Spilopelia senegalensis
15	Coraciformes	Common hoopoe	Upupidae
16		Indian roller	Coracias benghalensis
17		White-throated Kingfisher	Halcyon smyrnensis
18		Asian koel	Eudynamis scolopacea
19	Cuculiformes	Common hawk cuckoo	Hierococcyx varius
20		Greater cocul	Centropus sinensis
21		Pied crested cuckoo	Clamator jacobinus
22	Galiformes	Grey francolin	Francolinus pondicerianus
23		Jungle bush quail	Perdica asiatica
24		Partridges	Perdix perdix
25		Peacocks	Pavo cristatus
26		Quail	Coturnix coturnix

27		Rain quail	Coturnix coromandelica
28		Ashy Prinia	Prinia socialis
29	Passeriformes	Black drongo	Dicrurus macrocercus
30		Brahminy starling	Saturnia pagodarum
31		Common tail bird	Orthotomus sutorius
32		Common Lora	Aegithina tiphia
33		Common myna	Acridotheres tristis
34		Common swallow	Hirundo rustica
35		Common wood shrike	Tephrodornis pondicerianus
36		Eurasian golden oriole	Tephrodornis pondicerianus
37		Grey-breasted prinia	Prinia hodgsonii
38		House crow	Corvus splendens
39		Indian pitta	Pitta brachyura
40		Indian robin	Saxicoloides fulicatus
41		Large grey babbler	Turdoides malcolmi
42		Oriental magpie robin	Copsychus saularis
43		Pale-billed flowerpecker	Dicaeum erythrorhynchos
44		Purple rumped sunbird	Leptocoma zeylonica
45		Purple Sunbird	Cinnyris asiaticus
46		Red-vented bulbul	Pycnonotus cafer
47		Rufous bellied babbler	Dumetia hyperythra
48		Rufous treepie	Dendrocitta vagabunda
49		Scaly-breasted munia	Lonchura punctulata
50		Small minivet	Pericrocotus cinnamomeus
51		Thick-billed flowerpecker	Dicaeum agile

52		Tickells flycatcher	Cyornis tickelliae
53		White-browed Wagtail	Motacilla maderaspatensis
54		Yellow-billed babbler	Turdoides affinis
55		Cattle egret	Bubulcus ibis
56	Pelecaniformes	Indian pond heron	Ardeola grayii
57		Red nipped ibis	Pseudibis papillose
58		Night heron	Nycticorax
59	Piciformes	Coppersmith barbet	Megalaima haemacephala
60	Stigiformes	Indian owl	Bubo bengalensis
61		Spotted owlets	Athene brama
62	Suliformes	Little cormorant	Microcarbo niger

Table 9: Mammalian Fauna of KBR National Park

S.No	Order	Common Name	Scientific Name
1.	Artiodactyla Carnivora	Wild boar	<i>Sus scrofa</i>
2.		Civet cat	<i>Paradoxurus hermaphroditus</i>
3		Jackels	<i>Canis aureus</i>
4		Jungle cat	<i>Felis chaus</i>
5		Mongoose	<i>Herpestidae</i>
6	Chiroptera	Greater short-nosed fruit bat	
7	Chiroptera	Indian flying fox	<i>Pteropus giganteus</i>
8		Indian pipistrelle	<i>Pipistrellus coromandra</i>
9		Tickell bat	<i>Heperopternus tickelli</i>
10	Lagomorpha	Black napped hare	<i>Lepus nigricollis</i>
11	Pholidata	Pangolin	<i>Pholidota</i>
12	Rodentia	Bandicoot rat	<i>Bandicota</i>
13		Five striped squirrel	<i>Funambulus pennanti</i>
14		Indian field mouse	<i>Mus booduga</i>
15		Indian flying squirrel	<i>Petaurista philippensis</i>
16		Indian porcupine	<i>Hystrix indica</i>

Table-10: Comparative Information of Geography of Three National Parks

S. No	Name of the park	Location	Area	Longitude	Latitude	Distance from MGBS	Notified year	Weather	Indicator species	Forest type
1	Mahavir Harina	Vanasthalipuram, Rangareddy.	3605 Acres	77°21'49" E & 78°49'24" E	17°36'N 78°47'E	15 km	5-10-94 vide G.O Ms no.208 E&F(for III) dt. 10-10-94.	Max:45°C Min: 9°C	Black buck.	Southern tropical dry deciduous forest.
2	Mrugavani	Chilkur, Rangareddy.	1211 acres	77°21'49" E & 78°49'24" E	17°21'19"N 78°20'17"E	20 km	21-7-1998 under sec 35 of wl(p) act 1972.	Max:45°C Min:10°C	Sambar, spotted deer, peafowl, jungle cat, monitor lizard.	Southern tropical dry deciduous forest.
3.	KBR Park	Opp TDP Office, Road Number 2, Banjara Hills, Hyderabad.	390 acres	77°21'49" E & 78°49'24" E	17°25'14"N 78°25'09"E	9 km	Vide G.O No. Ms No.187 EFS&T (For III) Dt-3-12-1998.	Max:45°C Min:10°C	Peacock, monitor lizard.	Southern tropical dry deciduous forest.

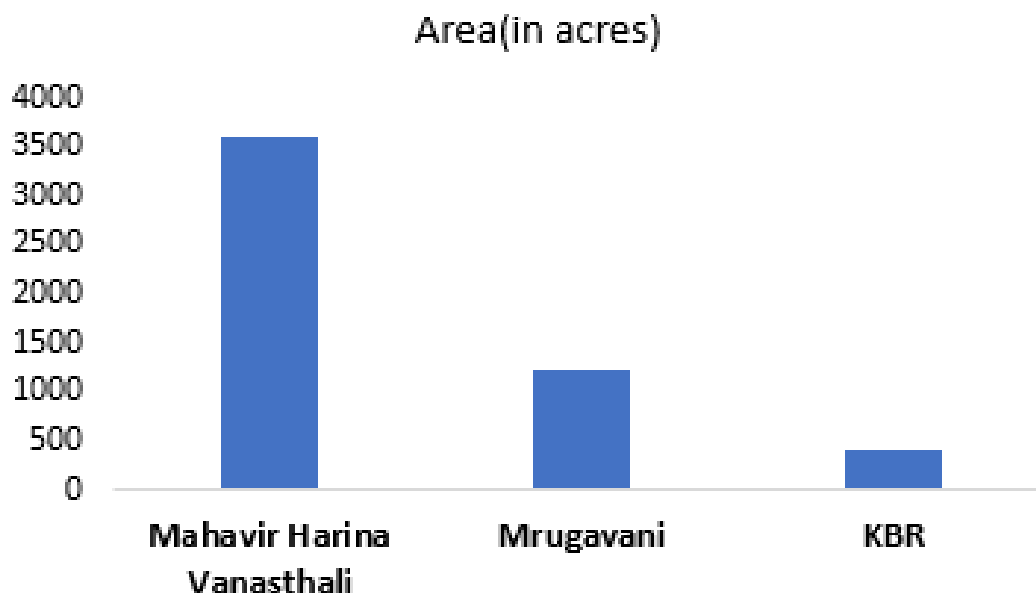
**Fig-2: Graphical Representation of the Area of Three National Parks**



Fig-3: Physical Map of Mahaveer Harina Vanasthli National Park



Fig-4: Physical Map of KBR National Park



Fig-5: Physical Map of Mrugavani National Park

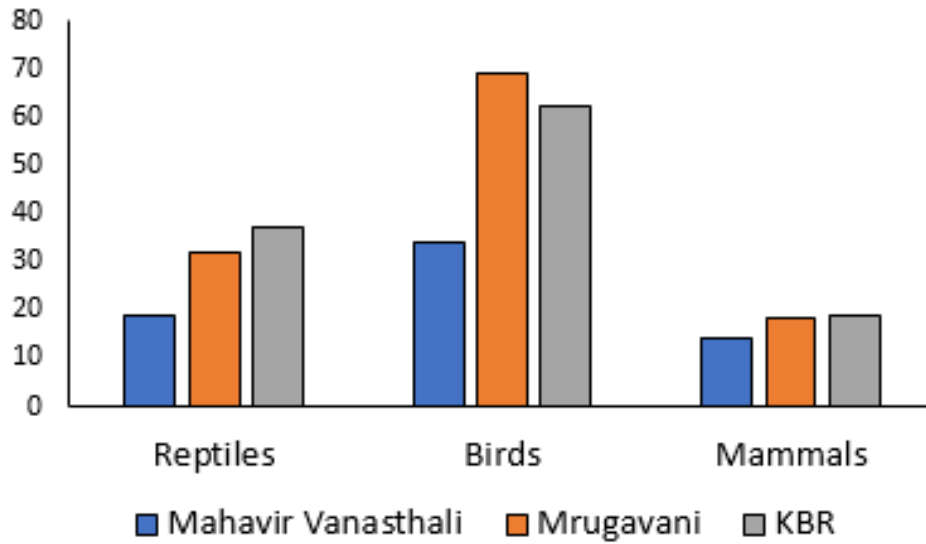


Fig-6: Graphical Representation of the Faunal Diversity Of Reptiles, Birds and Mammals of Mahaveer, Mrugavani, and KBR National Parks

Table-11: Population Number Dynamics of Mammals of Mahaveer Harina Vansthli National Parks of Last Four Years

Fauna	2017-2018	2018-2019	2019-2020	2020-2022
Spotted deer	1495	1519	1596	1610
Blackbuck	1186	1252	1291	1305
Four-horned antelope	9	9	9	10
Peafowl	1275	1382	1431	1485

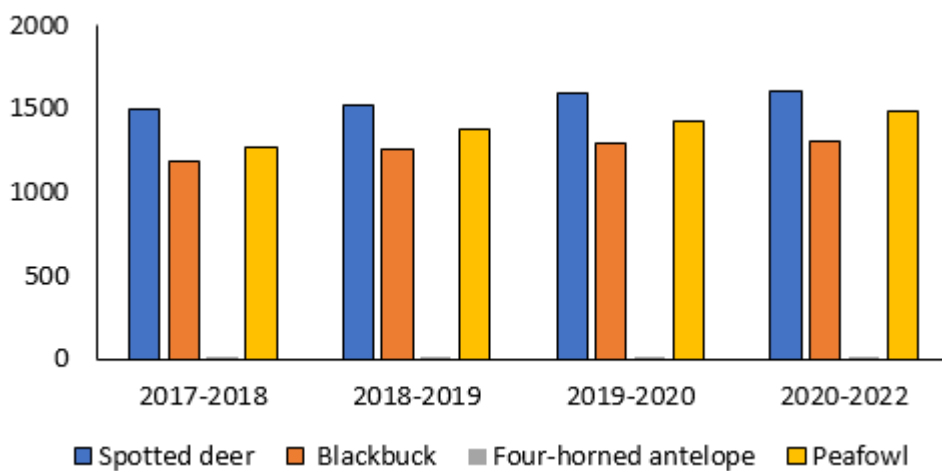


Fig-7: Bar diagram showing population Dynamics of Mahaveer Harina Vanasthli National Park For the Last 4 Years

Table-12: Population Number Dynamics of Deer of Mrugavani National Parks in the Last Four Years

Name of the wildlife	2017-2018	2018-2019	2019-2020	2020-2021
Spotted deer	480	493	516	542
Sambar deer	49	53	58	64
Total	529	546	574	606

Fig-8: Bar Diagram Showing Population Dynamics of Deer In Mrugavani National Park of Last Four Years

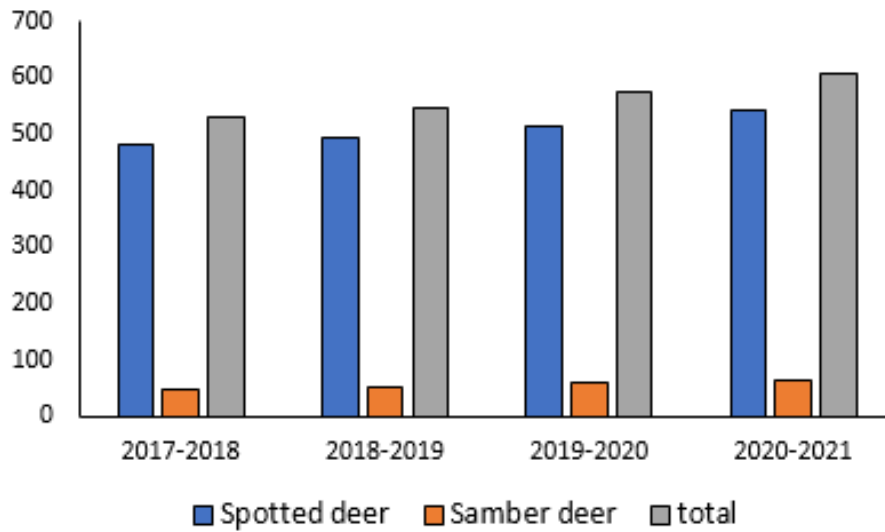


Table-13: Population Number Dynamics of Peacock, Fowel in KBR National Park In the Last Two Years

Name of the wildlife	2020-2021	2021-2022
Peacock &Fowel.	514	544

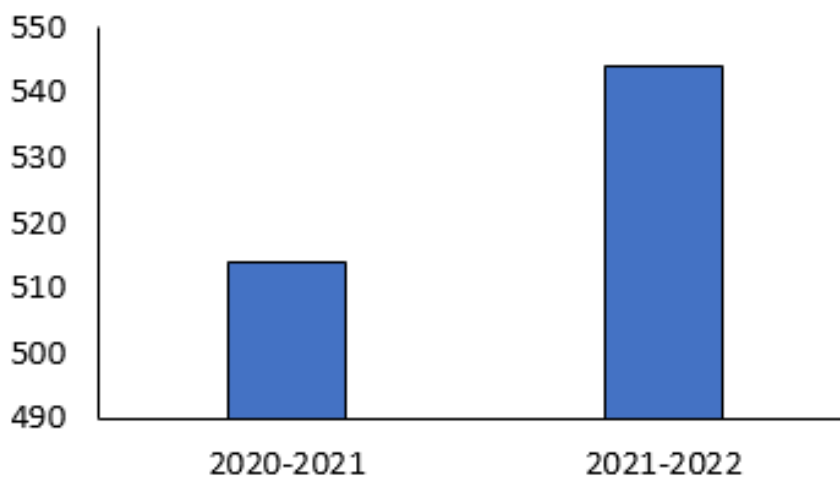


Fig-9: Bar Diagram Showing the Peacock, And Fowel Population Dynamics of Kbr Park

Significance

The national parks in Hyderabad are crucial for maintaining the ecological balance of the region. They serve as important centers of biodiversity and help in preserving the natural habitat of several species of plants and animals. These parks also play a crucial role in educating people about the importance of conservation and sustainable development. The rapid urbanization of the city has resulted in the loss of several acres of forest land, leading to a decline in the number of wildlife species.

Conclusion

The national parks in Hyderabad are important centers of biodiversity and serve as crucial habitats for several species of plants and animals. They are also important tourist destinations and play a crucial role in promoting eco-tourism and sustainable development. The following conclusions are drawn from the analysis of the data, Upon observing the physical geography of the three parks, it is discerned that they are located within a 20-kilometer radius and that they share similar conditions with different surface areas. The largest of the three parks is Mahaveer harina vanasthali, followed by Mrugavani and KBR national parks. The faunal diversity of the three parks demonstrated that the diversity of birds is greater than that of reptiles and mammals. The following is the population dynamics of the three parks, According to data from the past four years, the population of spotted deer, black buck, four-horned antelope, and peafowl has increased in Mahaveer harina vanasthali national park. In the past four years, an increase in the number of spotted and sambar deer has also been observed. The population of peafowl in KBR Park has also increased over the past two years, as evidenced by a rise in the count over the past two years.

Acknowledgment

I would like to show my immense gratitude towards the forest department of the Telangana state government and also the staff of all the 3 national parks who have provided this valuable data for the current research work.

Note: Map showing Tiger Reserves, National parks, Sanctuaries, and Zoos, site map of Mrugavani, KBR National Park are collected from curator national park Telangana Forest department Hyderabad, and Mahavir Harina Vanasthali national park site map is collected from a brochure issued by Forest range officer MHVN, Telangana forest department.

Conflicts of Interest

Authors declare that there is no conflict of interests regarding the publication of this paper.

References

- [1] Bruner AG, Gullison RE, Rice RE, da Fonseca GAB(2001) Effectiveness of parks in protecting tropical biodiversity. *science*291:125-126.
- [2] S. Chape, S. Blyth, L. Fish, P. Fox, and M. Spalding, *The 2003 United Nations List of Protected Areas*, IUCN and UNEP-WCMC, Cambridge, UK, 2003.
- [3] Champion and Seth,1968, classification of forests.
- [4] Census 2011.
- [5] Mangan, Elizabeth U. Yellowstone, the First National Park from Mapping the National Parks Archived 19 October 2013 at the Wayback Machine. Library of Congress, Geography and Map Division.
- [6] Ministry of Environment & Forests (2013) Protected Area Network., Retrieved on 15th March 2015 from <http://envfor.nic.in/public-information/protected-areanetwork>.
- [7] National wildlife database January 2023.
- [8] Wilke D, Adams wm, Redford KH(2008) Protected areas, Ecological scale, and Governance; a framing paper, protected areas, Governance and scale wildlife conservation society working paper,36.