

MAMMALIAN DIVERSITY AND THEIR ECOLOGY OF PENCH TIGER RESERVE SEONI (M.P.)

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ABSTRACT:- Pench National Park or Tiger Reserve is one of the premier tiger reserves of India and the only one to straddle across two states - Madhya Pradesh and Maharashtra. Ordinarily, the reference to Pench is mostly always to the tiger reserve in Madhya Pradesh are very rich in Mammalian biodiversity. Located south of the tiger reserve area in Madhya Pradesh, is the Pench Tiger Reserve, Maharashtra. On the Maharashtra side, the Pench Tiger Reserve has a core habitat area of 257.3 km² along with a buffer/peripheral area of 483.96 km². The exploration and intensive trips were made during the research periods revealed a total 31 large and small mammalian species of animals. Wild boar (*Sus scrofa*), Porcupine, (*Hystrix indica*), Mongoose (*Herpestes edwardsii*), Civet (*Paradoxurus hermaphroditus*), Hedgehog (*Erinaceus europaeus*), Siyar (*Canis aureus*), Panther (*Panthera pardus*) and Sloth bear (*Melursus ursinus*) are few rare species studied. Although the mammalian diversity reflects a satisfactory appearance, the habitat destruction, deforestation, Poaching and changing land use patterns are major and serious threats for these beautiful animals involved in ecosystem stability.

KEYWORDS- Habitat destruction, Deforestation, Residual Mountain, Poaching, Rocky terrain, Ecosystem Stability.

INTRODUCTION:-

Pench National Park or Tiger Reserve is one of the premier tiger reserves of India and the only one to straddle across two states - Madhya Pradesh and Maharashtra. Ordinarily, the reference to Pench is mostly always to the tiger reserve in Madhya Pradesh. The portion of the reserve that is in Madhya Pradesh is nestled in the southern slopes of the Satpura range of Central India. Pench Tiger Reserve comprises the Indira Priyadarshini Pench National Park, the Pench Mowgli Sanctuary and a buffer. It derives its name from its life

line-the River Pench. Inside the park, the river flows from North to South before going on to join the Kanhan River, while splitting the Park into two, and forming the boundary of Seoni District and Chhindwara District districts of Madhya Pradesh. The Meghdoot dam built across Pench River at Totladoh has created a large water body of 72 km² out of which 54 km² falls in M.P. and rest in the adjoining state of Maharashtra. The Pench River which emerges from Mahadeo Hills of Satpuda Ranges and the various nallas and streams which drain into it, all flow through the forests of Protected Area. The Satpuda ranges which bear the forests of the Protected Area act as an excellent watershed area for the Totladoh as well as lower Pench Reservoirs.

On the Madhya Pradesh side, the Pench Tiger Reserve encompasses a core area of 411.33 km², with a buffer of 768.3 km², making for a total protected area of 1179.63 km². The core area includes the Mowgli Pench Wildlife Sanctuary whose area is 118.30 km². The Buffer Zone is constituted by Reserve Forests, Protected Forests and Revenue land. Located south of the tiger reserve area in Madhya Pradesh, is the Pench Tiger Reserve, Maharashtra. On the Maharashtra side, the Pench Tiger Reserve has a core habitat area of 257.3 km² along with a buffer/peripheral area of 483.96 km². of the Mansingdeo Sanctuary, making for a total protected area 741.2 km². Spanning over a total protected region of over 1920 km², both these tiger reserves are included in the Level 1, 13,223 km² (5,105 sq mile) Tiger Conservation Unit – 31 (Kanha-Pench TCU). As per many experts, this area is considered as one of the most prime and critical tiger habitat remaining in central India.

Mammals derive their name from the specialized milk producing and secreting glands present in the female parent for their feeding. Mammals are very special and unique organism on the basis of their anatomy,

morphology, physiology, ethology and ecological perspectives and habitual attributes. They were originated Mesozoic era from early the rapsides of Triassic period, which are considered as a connecting link between reptiles and early mammals. Most of modern day mammals are related to synapsids which initially originated in the carboniferous period. Modern day mammals are characterized their heterodonts, jaws, hearing, four chambered heart, hairs on the body, live birth, ear ossicles large braincase and expanded new cortex of the brain associated with their greater capacity and intelligence.

OBJECTIVE OF STUDY:-

The objective of this paper is to study the Mammalian diversity and ecology of Pench Tiger Reserve Seoni.

REVIEW OF LITERATURE:-

Human-wildlife conflict is a global issue, which has been extensively studied all over the world. Recent literature on human-wildlife conflict and its control measures. The total 80% length is 550 km falls in Rajasthan (Bhalla R.L., 2018 Sharma SK and Sharma S, 2002). There are four major geographical and well defined climate zones in Rajasthan i.e The Thar desert with dry and Hot climate, The Aravalli mountain Range with moderate Climate, the Eastern plain with agriculture belt and the Haroti plateau and Mahi basin with highest rainfall and evergreen climate. (Saxena H.M. 2019; Chouhan T.S. 2020). Although the state principally falls in the Tropical zone and the rainfall is irregular and scanty with frequent droughts and famines, it is a treasure trove of biodiversity. The Central Aravalli Range mainly located in the Ajmer district and the Rajsamand district and harbors two wildlife sanctuaries namely Raoli – Todgarh and Kumbhalgarh wildlife sanctuary with a wide spectrum of floral and faunal diversity. The vegetation of the Area is characterized by a quite Xerophytic and Mesophytic as the area is located in the center Heartland of Rajasthan and is a transitional zone between the Thar desert in the west and Mewar plains in the south-east direction. The main vegetation is defined as deciduous and dry deciduous spiny forests dominated by trees and shrubs namely *Prosopis cineraria*, *Prosopis juliflora*, *Zizyphus nummularia*, *Zizyphus mauritiana*, *Salvadora persica*, *Capparis decidua*, *Capparis sepiaria*, *Acacia nilotica*, *Acacia*

Senegal etc. in the rocky terrain and rocky valleys with sandy plains, while at the upper reaches and height of hills.

Anogeissus pendula, *Sterculia urens*, *Ficus* species, *Grewia davine*, *Acacia senegal*, *Acacia catechu*, *Boswellia serrate* and many species of Figs are common plants. The vegetation near by the river banks is dominated by Figs, *Grewias*, Jamuns, wild mangoes while in sand dunes spiny *Acacias*, *Acacia senegal*, *Euphorbias*, *Cactus* and *Zizyphus* species are common plants. The Faunal component specially the mammals which are directly or indirectly dependent for the regeneration and plants of diverse nature in turn create a huge and varied nature of the diversity. Rocky and hilly terrain, large Sand dunes, high mountain peaks, large plateaus, sandy agricultural plains, valleys etc. a wide variety of Mammalian and other animal diversity. The mammals may be of many different types i.e. are Residents, Occasional visitors, migrators etc. The commonly occurring mammals are Mongoose (*Herpestes edwardsii*), Small Indian Mongoose (*Herpestes auropunctatus*), Striped palm Squirrel (*Funam buluspennanti*), Rhesus monkey (*Macaca mulatta*), Blue Bull (*Boselaphus tragocamelus*), Hare (*Lepus nigricollis*), Indian Gerbil (*Tatera indica*), House rat (*Rattus rattus*), Indian Fieldmouse (*Mus booduga*) Indian mole rat (*Bandicota bengalensis*) Sambhar (*Cervus unicolor*), Chital (*Axis axis*), Jackal (*Canis aureus*), Bat (*Pteropus giganteus*), langur (*Semnopithecus entellus*), wild cat (*Felis lybica*), Hedgehog (*Paraechinus micropus*), Panther (*Panthera pardus*) Indian wild Boar (*Sus scrofa*); are common and occasionally appearing mammals and usually spotted by a common man in the middle Aravalli's shrub lands forest and agricultural belts (Sharma, S.K. ; Sharma, S and Sharma, S., 2003).

METHODOLOGY:-

Assessment and studies of Mammalian fauna were carried out during the research period of with regular intervals at least thrice in a year. The citing was managed in every important time especially that of evening, morning, noon and rarely in Night for the nocturnal mammals such as wild cats, Jackals, foxes, wild boars etc. Following methods were used.

Table No.1 Mammals Diversity, ecology and Conservation Status of Pench Tiger Reserve Seoni (M.P.)

The zoological name of the species	Common name	Habitat subtype	Major Threat	Conservation status (IUCN. latest 2018-2024)
<i>Axis axis</i>	Chital /hiran	Plains / Ag land	Poaching	Not evaluated
<i>Boselaphustragocamelus</i>	Roj /rojda	Ag land /Plains	None/Nil	Not evaluated
<i>Bandicotabengalensis</i>	Mole /Chuchundar	Store houses of grains	Nil	Least concern
<i>Cynopterus Sphinx</i>	Short nose offruit bat	Trees	Loss of Tree cover	Least concern
<i>Canis aureus</i>	Jackal/siyar	Rocky terrain	Habitat loss	Near threatened
<i>Felis lybica</i>	Desert cat	Sand dunes	Habitat loss	Vulnerable
<i>Felis silvestris</i>	Bilav / wild cat	Forest /Rocky terrain	Habitat loss	Near threatened
<i>Felis Caracal</i>	Desert lynx	Forest /Rocky terrain	Habitat loss	Near threatened
<i>Funam buluspennantii</i>	Five striped palm squirrel	Omnipresent	Loss of Tree cover	Least concern
<i>Golunda ellioti</i>	Bush rat	Shrub land	Habitat loss	Least concern
<i>Hystrix indica</i>	Indian Sehi /Porcupine	Shrub and Rocky terrain	Habitat loss	Vulnerable
<i>Hyaena hyaena</i>	Lakarbagga	Forest	Habitat loss	Vulnerable
<i>Herpestes edwardsii</i>	Common mongoose	Plains	Habitat loss	Least concern
<i>Herpestes smithii</i>	Forest mongoose	Forest	Poaching	Least concern
<i>Herpestes javanicus</i>	Small Indian mongoose	Plains /Dunes	Poaching	Least concern
<i>Mus musculus</i>	House mouse	Human settlement	Loss of Tree cover	Least concern
<i>Mus booduga</i>	Field mouse	Agri land	Nil	Least concern
<i>Melursus ursinus</i>	Rich sloth bear	Rocky / Hillsterrain	Habitat loss	Critically endangered
<i>Panthera pardus</i>	Panther/nar	Rocky Hills	Habitat loss	Vulnerable
<i>Macaca mulatta</i>	Hanumanlangur	Trees /Arboreal	Tree loss	Least concern
<i>Semnopithecusentellus</i>	Monkey	Rocky Hills	Habitat loss	Least concern
<i>Pteropus giganteus</i>	Flying fox	Rocks	Loss of Tree cover	Least concern
<i>Pteropusrodricensis</i>	Fruit bat	Trees / Figtrees	Loss of Tree cover	Vulnerable
<i>Tatera indica</i>	Indian Gerbil	Plains	Nil	Vulnerable
<i>Gazella bennettii</i>	Chinkara	Sand Dunes	Habitat loss	Near threatened
<i>Antelope cervicapra</i>	Black buck	Sand Dunes	Habitat loss	Near threatened
<i>Sus scrofa</i>	Wild boar	Rocky Hills /Agri land	Poaching	Least concern
<i>Manis crassicaudata</i>	Pangolin	Rocky terrain	Poaching	Least concern
<i>Lepus nigricollis</i>	Hare	Shrub and Agri land	Poaching	Least concern

CONCLUSION:-

Total 31 Mammalian species were encountered and studied which are present in the Pench tiger reserve Seoni (M.P.). The ever increasing population

encroachments in the habitats of the wildlife and resulting fragmentation of the habitat are a major threat to the mammalian biodiversity of the area. At the same time tree cutting and expansion of human settlement as

well as poaching of small mammals is another threat. The large predatory mammals present in the area are leopard, Jackal, Hyaena (Iakadbagha) etc. Whereas small carnivores are civets and other related cats. Large herbivores include Roj / Nilgai, chital, Sambhar, wild boar, Black buck etc. Smaller ones are House rat, Mole, Grey musk shrew, five striped palm squirrel. Arboreal Animals are etc. Monkeys, langurs, flying foxes, bats etc. Indian wild Boar, Indian Porcupine, Indian grey musk shrew, Brown Mongoose, siyar, Jackal, Hedgehog, Pangolin, civet are very rare mammals in the area.

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