*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01

Published by: National Cave Research and Protection Organization, India

ambient SCIENCE
Vol. 12(1): 01-08
Year 2025

AMBIENT APPRAISAL

# Mammalian Diversity and their Ecological Significance: a Survey Report from Rajnandgaon and Khairagarh District, Chhattisgarh, India

**Pratik Thakur[1,5]*, A.M.K. Bharos[2], Avinash Bhoi[3], Danesh Sinha[4,5]**

[1]Govt. Girls College Khairagarh, Dist- Khairagarh-Chhuikhadan-Gandai (C.G.), India
[2]B-101, Gayatrinagar, Raipur, 492007, Chhattisgarh, India
[3]House no.- 26/929 Nav Durga Chowk, Pt. Ravi Shankar Shukla Ward, Raipur, Chhattisgarh, 492001, India
[4]Misiya Bada, Ward 09, near Brotherhood Lodge, Dongargarh, Rajnandgaon, Chhattisgarh, 491445, India
[5]Prakriti Shodh Evam Sanrakshan Welfare Society, C.G., india

Study Area: Rajnandgaon, Khairagarh, Chhattisgarh, India
Coordinates: 21.10°N 81.03°E; 21.42°N 80.97°E

Key words: Wildlife, Carnivore, Conservation, IUCN status.

## Abstract

Covering a range of habitats and forest types, 35 mammalian species were identified, and classified highlighting notable species such as the Tiger (Panthera tigris), Leopard (Panthera pardus), and Indian Pangolin (Manis crassicaudata). The species encountered were also classified under various categories of IUCN eg; Endangered-2 species, Vulnerable-4 species and Least Concern-29 species and WPA 1972, Schedule I to V and have been discussed. Key threats are habitat loss, human-wildlife conflict, poaching and several anthropological causes, which harm the mammalian population. We suggest a protective area around Dhara forests is worth consideration for the creation of a community Conservation Reserve.

## Introduction:

India represents a total of 427 species which is 7.8% of the global mammalian species (Wilson & Reeder, 2005). Chhattisgarh state located in central region, with its 44% forest cover mosaics of habitats has the potential to harbour rich fauna, as presently it lacks proper updated Inventorization. A total of 749 invertebrate and 358 vertebrate species have so far been reported from the state (Chandra & Boaz, 2018). The notable studies were by Prater (1971), Sterndale (1982), Brander (1991), Lydekker (2005), Johnsingh & Manjrekar (2013), and Chandra (2007) which covered Madhya Pradesh (MP) including Chhattisgarh (CG), *i.e.*, central India. Harshey & Chandra (2001) reported minimal sightings from Rajnandgaon (RJN) district and Chandra & Boaz (2018) documented 28 mammal species in erstwhile adjoining Durg district. .

Rajnandgaon and Khairagarh (KHG) districts encompass a diverse range of forest types and geographical features, which collectively contribute to rich mammalian biodiversity. Both of these districts are characterized by their varied topography and climate, which shape their distinct ecological zones. The districts are located in the southeastern part of the Satpura Range, an area known for its rugged terrain and diverse landscapes. Forests of RJN and KHG are classified as part of the Dry Deciduous Southern Tropical Moist Deciduous forest region, diverse range of deciduous type (Champion & Seth 1968). Forests cover in RJN and KHG districts, is 2923 Sq Km which is 36.435 % of its geographical area (CBSAP, 2003). Presently there is no notified protected area in these districts , though sufficient potential is indicated. These districts experience a tropical climate with distinct wet and dry seasons, From the RJN headquarters, Kanha Tiger Reserve (KTR) MP is 205 km away, Navegaon-Nagzira National Park ( NNP) Maharashtra (MS) 124 km away, and Bhoramdev Wildlife Sanctuary (CG) is 115 km away. All three protected areas are connected to the Dongargarh-Dhara Reserve Forest through forest corridors, which facilitate movements for large mammals. River Baghnadi forms the boundary between Chhattisgarh and Maharashtra. This study is aimed to carryout first comprehensive documentation of mammalian diversity in RJN and KHG districts.

## Methodology

The study was conducted between 2019 to 2024. Mammalian diversity in the study area was assessed through random walks and observational surveys using cameras and binoculars to record sightings of various species. Wildlife signs and indicators, including pugmarks, scratches and scats, were systematically documented to identify species' presence and activities. Most surveys were conducted during morning and evening hours, with occasional, accidental encounters during travel in the night hours. Identification and status were determined with the aid of standard literature (Prater 1971; Johnsingh &

*Corresponding Author: *pratik5959@gmail.com*

ISSN- 2348 5191 (Print) & 2348 8980 (Electronic)

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01



Manjrekar, 2013) and consultation with prominent subject experts. The study primarily is focused on the Dongargarh Dhaara Reserve forests area of RJN district, though efforts were made to cover the maximum possible area. To ensure the safety of the animals, the specific locations, hotspots, and dates of sightings have not been disclosed.

## Observations and Results

The study revealed the presence of mammalian species belonging to 7 Orders, 17 families, and 35 species, All are resident, but with time present status of a few species is found rather uncertain., they still enter and wander in erstwhile territories. The species found were examined under Wildlife Protection Act 1972 eg; Schedule I – 6 (19.35%), Schedule II - 7 (22.58%), Schedule III – 5 (16.12%), Schedule IV – 3 (9.67%), Schedule V – 10 (32.25%), which are mentioned in Table-1 & Figure-1.

**Threatened Species:-** The 35 species have been classified in different categories of their conservation status as defined by IUCN 2024 eg; Endangered-2 (6.45%), Vulnerable-4 (12.90%) and Least Concern-29 (80.64%). The conservation status with legislative aspect is seen through the Wildlife Protection Act1972, amended from time to time (Figure-1).

**Description of Species:** Various species recorded in RJN, KHG districts have been described here under:

Sloth bear (*Melursus ursinus*): Despite its "Vulnerable" status in IUCN and placement in Schedule II of WPA 1972, this un-predictive natured species is commonly observed in forest patches and along forest edges in the district. This species depends on forests and cultivated lands for omnivorous food. Observations have been recorded in agricultural fields up to 4 Km from forested areas,(Plate-1,a) as well as within the precincts of the city. Encounters between humans and bears are common, near villages, cultivation close to the forest, The conflict is more common during *Madhuca longifolia* flowering season and the period when honey becomes readily available. Occasionally a mother bear with cubs is encountered near the Temple complex nearer to a town (Dongargarh , RJN dist). In 2020, a pack of two feral dogs was observed chasing a sloth bear, and in 2022 a group of three village feral dogs engaged in harassment of bears. Bears are killed by locals using many conventional methods in a quest to obtain their body organs for medicinal, black magic purposes.

Leopard (*Panthera pardus*): The species is classified under the category "Vulnerable" of IUCN and placed in Schedule-I of WPA 1972. It is sporadically scattered over both the districts and inhabits forests, stony hillocks and even plains. Enters human habitations of towns and villages. On November 29, 2022, two leopards, were sighted and photographed (Plate-1,b), possibly a male and a female, in the Dongargarh-Dhaara Reserve Forest, where they rested on the road for over 45 minutes. Additionally, four sets of pugmarks and scats at various locations were found within the RJN district. It is more commonly met with in southern parts of the district, namely Mohla-Manpur tehsils. On 3rd February 2023, a leopard was captured on CCTV chasing a street dog near Maa Balmeshwari Mandir, Dongargarh, and later was also photographed by tourists in the temple campus. Further study is required to determine the population status and distribution of leopards in the region. The species is vulnerable and is invariably killed by locals when sighted.

Tiger (*Panthera tigris)*- Tigers are found in the forests in fair numbers, but their population dwindled in the last two decades, so much so that presently no tiger was reported from these districts. Only the wandering tigers from adjacent Maharashtra entered and used the forests as the corridor. One such tiger was reported in the year 2018, which stayed in Chabuknala area for about a week, then moved back. On 23rd December 2020, pug marks (Plate-1,c) of a Tiger around Dongargarh town were seen and the next day it moved crossing the residential and agricultural areas, to Tilaibhath village in the adjacent Khairagarh district. Near a Tank (Ruse), Khairagarh Block pug marks were found on December 23rd 2021. Additionally, another set of pug marks at another dam (Ningo) on March 26nd 2023, approximately nine Km from the nearest forest patch. On December 23rd, 2023, a tiger was videographed in the Chhuriya block (Satyendra Sahu, Pers. Comm.). The tiger was observed in the teak plantations, adjacent to the National Highway. It was harassed by loud barks of feral dogs on the other side of NH. Tiger was searching for a safe place, as its position was already located and surrounded by the barking dogs. The tiger kept a close watch on these feral dogs. On 27th September 2011, a horrific incident took place in Chhuriya Block, where more than 5,000 people gathered and brutally beat a tigress with sticks until it died. Afterward, they paraded the lifeless body of the tigress in a rally. The villagers, driven by suspicion, believed the tigress was responsible for killing 11 cattle and one elderly woman from the village. These findings suggest movement of tigers in the district's irregularly. The species is classified under category "Endangered" of IUCN and placed in Schedule-I of WPA 1972.

Sambhar (*Rusa unicolor*): The species is the largest deer found in the country. This massive deer is under category "Vulnerable" of IUCN and in Schedule-III of WPA 1972. It is a forest-loving animal, stated to wallow in the mud (Brander, 1991). Sambhar is unevenly distributed in both of our districts. Sightings are rare, with only two individuals recently recorded in dense hilly forest areas of the Dhara range (RJN) in recent years. Once fairly common but presently only occasionally seen and heard. Stags are very rarely found (Plate-1,d).

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01

Indian Pangolin (*Manis crassicaudata*): This nocturnal species spends most of its time inside its burrow, thus is rarely encountered. It is classified as "Endangered" by IUCN and in Schedule I of WPA 1972. Presently they are either captured alive or killed to extract overlapping scales from their body. These scales are much in demand in southeastern and northern Asian countries. In the greed of money, the cases of killing are increasing. This trade has caused an intense alert amongst the conservationists the world over. Several such cases have been noticed in Chhattisgarh also in the recent past. Luckily on October 13th, 2022, around 10 PM, a report of a sighting of a pangolin was received near a town (Dongargarh, RJN), specifically on the outskirts of a residential area, hidden inside a farmhouse. The pangolin was safely rescued and released by the State forest department.

Cheetal (*Axis axis*): This is the most common species frequently seen in all types of forests. A year back, an old stag was observed gnawing a discarded horn of cheetal in KTR, possibly to substantiate diet with calcium, potassium or other necessary minerals. (Plate-1,e).

Four Horned Antelope (*Tetracerus quadricornis*): The Four-Horned Antelope is classified as 'Vulnerable' by IUCN and in Schedule–I of WPA 1972. It is commonly encountered across forest patches of the districts and was sighted and photographed at several locations, including small intermediate forest patches connected to larger forests via agricultural lands. In May 2022, a pack of five feral dogs was observed in a fruitless pursuit of a herd.

Black Buck (*Antilope cervicapra*): Presently it is classified as "Least Concern" by IUCN and in Schedule-I, WPA 1972. This beautiful species was previously one of the most common and abundant ungulate in the Indian plains (Prater, 1971). The population has drastically dwindled over the past years. In Chhattisgarh, it is found in the vast plains almost in every forest. The status of the species assessed by Ranjitsingh (1989) mentions a remnant population of 35-40 individuals from Rajnandgaon district (at that time it combined 3 districts). This species may still be surviving in small numbers in suitable areas, an intensive search may reveal it.

The Flying Fox (*Pteropus giganteus*) and other bat species: Large congregations of Flying foxes can be seen on old trees invariably near human settlements. Such roosting sites were seen nearer to a village (Chamgidripara of Dongargarh town) and a town (Chhuikhadan, KHG district). It was also observed at wetlands in the evening hours, flying low over the water surface to quench thirst. They are also good fertilizing agents, carrying pollen from flowers or one tree to another. Other common bats, like Smaller Fruit Bat (*Rousettus leschenaulti*), Indian Pipistrelle (*Pipistrellus coromandra*) have also been found, but could not be photographed.

Indian Wolf (*Canis lupus*): Wolves are often confused with jackals, the wolf is much larger and much shyer, its snout is longer and larger, and its eyes. The wolf tail is less bushy than that of a jackal. Tracks are likely to be confused with dogs and hyenas, its fore-feet are larger than hind feet (Johnsingh & Manjrekar, 2013). These parameters are important to identify and differentiate between the two species. This animal inhabits forests, bare and open plain, on the periphery of forests. Of late, they were not commonly seen but seem to have recovered, as their sightings now suggest. It was recorded at several locations within the study area (Plate-1,f).

Jackal (*Canis aureus*): This species is invariably found in the forest, cross country and enters the township freely. It causes big damage to maize and other crops. Its howling call proclaims its presence. It is noticed that this species has disappeared from the earlier known locations. The Dewar tribe, residents of Chhattisgarh, are a hunting tribe. Jackals are included in their list. They sell stubbed jackals on national and other highways (Plate-1,g).

Jungle Cat (*Felis chaus*) and Common Palm Civet (*Paradoxurus hermaphroditus*): These forest-dwelling smaller cats can also be seen in cultivated, bushy areas, latter even in townships (Plate-1,h). There is the possibility of occurrence of Rusty Spotted Cat (*Felis rubiginosa*) as it has been found in adjacent districts. On October 2024, around 7 PM. While travelling from Bhavani Mandir to Dongargarh, we observed numerous frogs that had been killed in road accidents. Surprisingly, a Jungle cat appeared on the road, seemingly risking its life to feed on the dead frogs. However, we noticed that the jungle cat had mastered this risky behavior. It would approach the road and wait for the headlights of the incoming vehicles. As soon as the vehicle's lights illuminated the road, the cat would quickly retreat to the roadside, only to return, once the vehicle had passed and caught the frogs. This behavior, while showcasing the jungle cat's adaptability, highlights the significant risk it faces from traffic while scavenging the road.

Grey Mongoose (*Urva edwardsii*): Mongoose are commonly encountered in forest, open land and cultivation, even in townships. Preys on rats and mice, snakes, lizards, frogs and larger insects, hunts lonely or in pairs. Its tail, which is as long as its body and is tipped with white or yellowish-red (Plate-1,i). Ruddy Mongoose (*Herpetes smithi*), which is readily distinguished by the black tip to its tail curved upwards, occasionally, it lives in forested areas of central India, distinguishes it from the Grey Mongoose and is generally overlooked. It has been recorded in nearby forests, very likely it may be encountered any day.

Indian Wild Pig (*Sus scrofa cristatus*): Widely distributed species over the whole of India. Sounders of pigs are found in the forests, grasslands, scanty bush jungles, they freely

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01



invade the crops and cause considerable damage. Locals hunt them using different conventional methods, as their flesh is considered a delicacy. It has been recorded at several locations in the districts.

Indian Crested Porcupine (*Hystrix indica*): Mostly nocturnal, lives in burrows, so apparent rarely. It is hunted by locals for flesh and quills.

Bandicoot (*Bandicota indica*): A large creature of field and forest, it is widely distributed but seldom seen and essentially parasitic on man. It was sighted on the outskirts of the township.

White-Tailed Wood Rat (*Niviventer fulviventer*): This species inhabits dry or moist deciduous and evergreen forests, even in rocks, bushes, caves. It was found in the forest of Dhara. The members of the Muridae family are commonly seen in houses, to cross country (Plate-1,k).

Madras tree Shrew (*Anathana ellioti pallida*): This subspecies occurs both in dry and moist deciduous forests of central India. IUCN categorizes it in "Lower Risk (subcategory of Least Concern)'. On trees their ways are not the ways of squirrels. It is an expert climber, but it takes to trees as a means of escape or shelter. It has been recorded at several locations, mostly climbing, on getting disturbed during feeding on the ground. It is invariably overlooked considering it as a Palm Squirrel.

Honey Badger (*Mellivora capensis*) and three species of Otter, namely Smooth-coated Otter (*L.Perspicillata*), Common Otter (*Lutra lutra*), Small-clawed Otter (*Aonyx cinereus*): These are prevalent over most of the state, may be found in appropriate habitats of both the districts, though not yet encountered.

Asian Palm Civet (*Paradoxurus hermaphroditus*): This species has a black –brownish long coarse hair. The winter underwool is usually hidden in the winter coat, when shed generally shows a pattern of longitudinal stripes on the back and spots on shoulders and thighs. Limbs are always black. Facial markings variable, the most usual pattern is a white patch or spot below the eye, sometimes above it and one on each side of the nose (Prater, 1971). The shedding of the winter coat and its replacement by the summer pelage varies in the time of onset of summer. This phenomenon is more pronounced with the different geographical area variations. They seek their food at night which consists of by killing birds, small mammals, feeding on fruits, rats and mice, poultry (Johnsingh & Manjrekar, 2013). In April 2022, we shot a video of a pair of civet cats exhibiting characteristics of the Asian Palm Civet, such as a combination of black and brown coat color on the dorsal side, with a whitish underfur and pinkish leg extremities. However, one individual had a tail that was black and white. This same tail pattern was also recorded at the Bhoramdev Wildlife Sanctuary during the 2024 summer, which is commensurate with the above given description. The presence of a distinct masked face, the shape of the pointed ears, head, and snout, along with the color of the vibrissae and variation in fur length, all distinguished the two sighted individuals. Such morphs have been reported by Chunekar *et al.* (2018), and Pratar (1971) from Maharashtra state. Veron *et al.* (2015) opined the possibility of 2-3 subspecies within Paradoxurus hermaphrodites. Molecular studies of these different morphs observed are pertinent to reveal this complexity amongst the paradoxurus species. Since we have sighted both morphs in two different civets (*P.hermaphroditus*), the possibility of a morph transitional period from winter to summer can not be ignored. The observance of two different morphs of two civet individuals suggests that these variations could occur within the same population. and possibly within a single subspecies. This reinforces the need for further molecular studies to understand the genetic basis of these morphological differences and their implications for species classification.

The Brown Palm Civet (*Paradoxurus jerdoni*) found in the hill ranges of southern India is deep brown. Its habits are similar to those of Asian Palm Civet (*Paradoxurus hermaphrodites*), as such, it may cause further complexity, as far as the identification of species is concerned. Its distribution range also needs to be studied, looking to ecological changes.

**Threats**

The primary threats to mammals are habitat loss due to deforestation and agricultural expansion, which disrupt critical wildlife corridors and feeding grounds and water bodies. Tree felling by villagers is a common occurrence, further contributing to habitat degradation. Human-wildlife conflict, particularly with large predators such as Tigers and Sloth Bears, presents significant challenges as these animals encroach upon agricultural lands and urban areas. Pelts of tigers, leopards, smaller cats, and fat of bears fetch a high price.

Poaching and illegal wildlife trafficking exacerbate the risks faced by vulnerable species, such as the Indian Pangolin. Numerous poaching traps have been found within the forest. For instance, in the summer of 2022, long wire traps encircling Dam (Dangbora) was discovered, highlighting the clandestine nature of poaching activities. Electric wires extending into farms to deter wild boars have also been noted, with a Sloth Bear tragically killed in such an electric trap near a village (Dhara). These traps pose severe risks to mammals and humans. Some of the areas experienced a rapid decline in the deer population due to commercial deer hunting with firearms. Few villages like Ghotiya, Totalbharri, and Khursipaar use traditional methods of hunting, where feral dogs are deployed to chase the deers, sometimes for the whole day.

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01

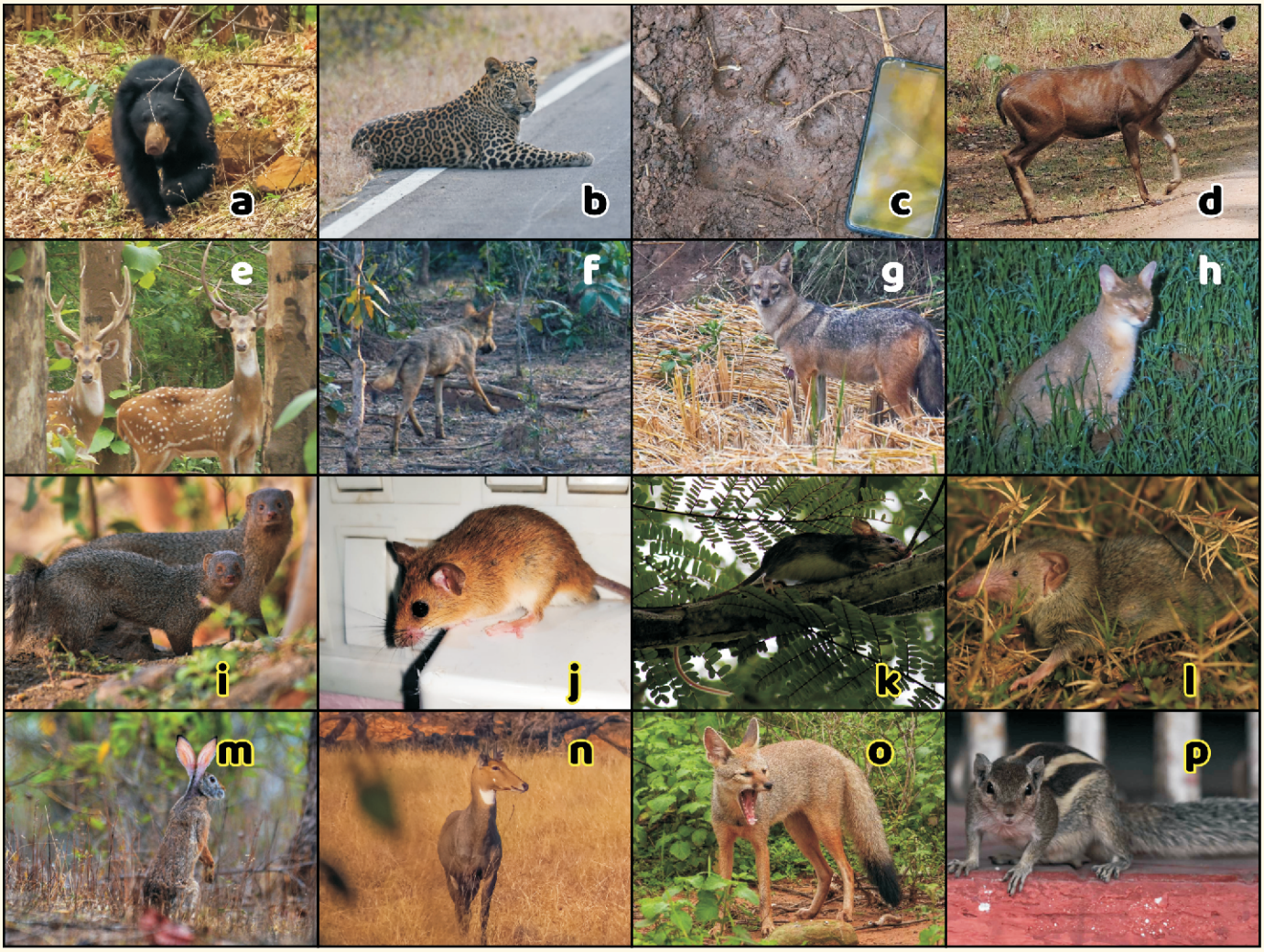


Plate-1: a) Sloth bear(*Melursus ursinus*) b) Leopard (*Panthera pardus*) c) Pugmark of Tiger(*Panthera tigris*) d) Sambhar (*Rusa unicolor*) e) Cheetal (*Axis axis*) f) Indian Wolf (*Canis lupus*) g) Golden Jackal (*Canis aureus*) h) Jungle Cat (*Felis chaus*) i) Grey Mongoose (*Urvaed wardsii*) j) Indian Field mouse (*Mus booduga*) k) White-Tailed Wood Rat (*Niviventer fulviventer*) l) Pygmy White-Toothed Shrew (*Suncus etruscus* ) m) Indian hare (*Lepus nigricollis*) n) Blue Bull (*Boselaphus tragocamelus*) o) Indian (Bengal) Fox (*Vulpes bengalensis*) p) Five Stripped Palm Squirrel (*Funambulus pennantii*)

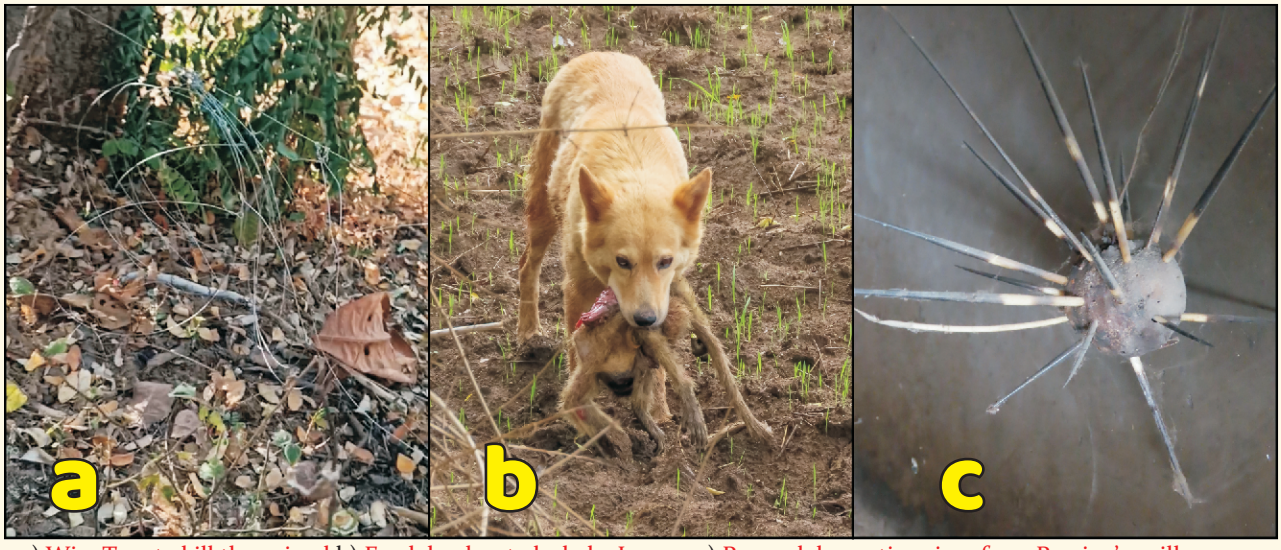


Plate-2: a) Wire Trap to kill the animal b) Feral dog hunted a baby Langur c) Prepred decorative piece from Porcine's quills

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01



Additionally, unmanaged water holes within the forest aggravate the situation. As forest streams dry up in the summer, mammals are forced to seek water at dams along the forest edges, making them more vulnerable to poachers. Another significant threat is the presence of feral dogs, which have been observed pursuing various species, including Four-Horned Antelopes, Sloth Bears, Indian Hares, Monkeys, and Indian Foxes. Furthermore, a wolf and a female feral dog, along with a small cub estimated to be three months old, potentially a hybrid between wolves and dogs. Such an animal was photographed on revenue land in Surguja District, underscoring the complex interactions between wildlife and feral animals and needs intensive study.

A glaring example of mass killing and trading of flesh of Grey Langurs, a much-publicised news was published in a local daily in April 2014, at the location 15 km from Ambagarh Chowki at the Village Parremata in southern RJN district. A group of villagers used to kill hundreds of Grey Langurs and dry their flesh on the sand banks of the river Shivnath. The meat was sold to communities around and in Bastar, flourishing into a big business. The culprits were apprehended but a few of them managed to escape. This mass killing has also resulted in religious provocation amongst the locals. In addition, the poachers also killed other wildlife. Possibly a similar incident took place in KHG district.

The grasslands near a village (Bharitola) have been converted into a large garbage dumping site, which includes municipal garbage, poultry waste, medical waste, and other refuse from the city. Numerous animals and birds have been observed foraging for food among the garbage. A high density of Bengal foxes (10-15 individuals) can be seen in this small area. One fox was videographed consuming food from a plastic chip wrapper, raising concerns for the health of the fox and other wildlife species in the vicinity.

**Myths**

Amongst the citizens, mostly rural folks, as found, they possess many myths about wild animals, and their organs are extensively used as medicines or charms. In one such case, a ball-shaped contraption containing 15 to 18 porcupine quills has been photographed inside a house in Dongargarh city, where the keeper used to deceive people by using the quills to remove evil spirits from their homes; additionally, they are kept by the groom during marriage as part of cultural belief.

In Rajnandgaon district and nearby areas, urban individuals often wear tiger and leopard nails and teeth as fashion statements to stand out and express their uniqueness. This trend reflects a desire for distinctive accessories, but it raises ethical concerns regarding using endangered species for adornment. The Asian palm civet is often misidentified as the kabar bijju (Honey badger (*Mellivora capensis*) and is targeted for killing due to misconceptions that kabar bijju will eat human flesh. These beliefs have contributed to a monstrous image of the kabar bijju in the area, leading to fear and persecution of this misunderstood species. These cultural beliefs and practices highlight the complex relationship between local communities and wildlife, underscoring the need for education and conservation efforts to protect these species.

Conservation

To mitigate the threats faced by mammals in Rajnandgaon and Khairagarh districts, community-based conservation efforts are essential. Engaging local communities in sustainable practices and raising awareness about wildlife protection, can help reduce habitat destruction and human-wildlife conflicts. Preserving wildlife corridors and implementing effective water management strategies will enhance habitat connectivity and protect vital resources. Additionally, promoting anti-poaching measures and controlling feral dog population are crucial for safeguarding vulnerable species and ensuring their long-term survival. We observed that the most biodiverse area in the RJN district is the Dongargarh -Dhaara Reserve forest, which has more forest cover and better connectivity with other protected areas, allowing wildlife to move and regenerate using corridors. However, recently, a Manghatta Jungle Safari was established in the RJN tehsil area, which has comparatively less wildlife suitability. While we do not criticize any conservation efforts, we simply want to emphasize the importance of conserving the Dongargarh-Dhaara Reserve forests. As a mitigation measure, it would be worthwhile to consider creation of a Community Conservation Reserve of about 200 Sq Km around Dhara.

## Conclusion

This study represents the first comprehensive assessment of mammalian diversity in Rajnandgaon and Khairagarh districts, revealing a rich assemblage of species across various taxonomic groups. Our findings highlight the importance of both protected and non-protected areas in sustaining diverse mammalian populations, including endangered and vulnerable species such as the tiger and leopard. Many pugmarks and scats remain unidentified, suggesting the possible presence of species like the Indian Striped Hyena (Endangered), Honey Badger and several other species. Future research should focus on population dynamics, habitat use, and the impact of human activities to guide more effective conservation efforts. Additionally, the deployment of camera traps, additional equipment, and increased funds are essential for a comprehensive survey. This study provides a crucial baseline for monitoring changes in mammalian diversity and underscores the importance of integrating local communities into conservation initiatives to ensure the long-term preservation of unique wildlife in both districts.

*Ambient Science*, 2025: Vol. 12(1); 01-08
DOI:10.21276/ambi.2025.12.1.aa01

Table-1: The taxonomic and ecologic including other status of the animal observed during the study

| S.N. | Family | Common Name | Scientific Name | IUCN | WPA Status | Habitat Status |
|---|---|---|---|---|---|---|
| | **Order-Chiroptera** | | | | | |
| 1 | Pteropodidae | Indian Flying Fox | *Pteropus giganteus* | LC | Sch-V | Urban and rural areas. |
| 2 | Vespertilionidae | Indian Pipistrelle | *Pipistrellus coromandra* | LC | Sch-V | Mostly Urban |
| 3 | Pteropodidae | Greater Short- Nosed Fruit Bat | *Cynopterus sphinx* | LC | Sch-V | Urban, Rural |
| | **Order-Primates** | | | | | |
| 4 | Cercopithecidae | Northern Plain Langur | *Semnopithecus entellus* | LC | Sch-II | Forest , Urban localities, orchards, Cultivation. |
| 5 | Cercopithecidae | Rhesus Macaque | *Macaca mulatta* | LC | Sch-II | Forest, hilly tracts |
| | **Order-Carnivora** | | | | | |
| 6 | Canidae | Wolf | *Canis lupus* | LC | Sch-I | Grassland / Forest |
| 7 | Canidae | Golden Jackal | *Canis aureus* | LC | Sch-II | Scrublands, forests. cross country. |
| 8 | Canidae | Indian Fox | *Vulpes bengalensis* | LC | Sch-II | Grassland, forests, cross country. |
| 9 | Ursidae | Sloth Bear | *Melursus ursinus* | V | Sch-II | Forest, cultivation |
| 10 | Felidae | Jungle Cat | *Felis chaus* | LC | Sch-II | Vicinity of wetland, plains, Forest, Cultivated area. |
| 11 | Felidae | Leopard | *Panthera pardus* | V | Sch-I | Forest / Urban outskirts, ravines etc. |
| 12 | Felidae | Tiger | *Panthera tigris* | En | Sch-1 | Forest, rarely close to cultivation |
| 13 | Viverridae | Common Palm Civet | *Paradoxurus hermaphroditus* | LC | Sch-II | Forests, outskirts of Urbanization |
| 14 | Herpestidae | Grey Mongoose | Urva edwardsii | LC | Sch-IV | Grasslands, even in human colonization. |
| | **Order-Artiodactyla** | | | | | |
| 15 | Cervidae | Indian Muntjac | *Muntiacus muntjak* | LC | Sch-III | Forest |
| 16 | Cervidae | Spotted Deer | *Axis axis* | LC | Sch-III | Forest |
| 17 | Cervidae | Sambhar | *Rusa unicolor* | V | Sch-III | Forest |
| 18 | Bovidae | Four-Horned Antelope | *Tetracerus quadricornis* | V | Sch-1 | Forest |
| 19 | Bovidae | Blue Bull (Nilgai) | *Boselaphus tragocamelus* | LC | Sch-III | Forest, cultivated areas in north India |
| 20 | Bovidae | Black Buck | *Antilope cervicapra* | LC | Sch-1 | Secondary Forest, open undulating plains |
| 21 | Suidae | Indian Wild Pig | *Sus scrofa cristatus* | LC | Sch-III | Forest, scrubs ,around cultivation. |
| | **Order-Rodentia** | | | | | |
| 22 | Erethizontidae | Indian crested porcupine | *Hystrix indica* | LC | Sch-IV | Forest |
| 23 | Hystricidae | Indian Pangolin | *Manis crassicaudata* | En | Sch-1 | Forest, plains, cross country |
| 24 | Muridae | House Mouse | *Mus musculus* | LC | Sch-V | Urban |
| 25 | Muridae | Indian Field Mouse | *Mus booduga* | LC | Sch-V | Cultivation |
| 26 | Muridae | House Rat | *Rattus rattus* | LC | Sch-V | Human settlements |
| 27 | Muridae | Lesser Bandicoot Rat | *Bandicota bengalensis* | LC | Sch-V | Urban and rural area. |
| 28 | Muridae | Greater Bandicoot Rat | *Bandicota indica* | LC | Sch-V | Urban and rural area. |
| 29 | Muridae | White-Tailed Wood Rat | *Niviventer fulviventer* | LC | Sch-V | Forest, scrubs |
| 30 | Sciuridae | Three stripped palm squirrel | *Funambulus palmarum* | LC | Sch-V | Urban/Forest, secondary forests, Gardens. |
| 31 | Sciuridae | Five Stripped Palm Squirrel | *Funambulus pennantii* | LC | Sch-V | Urban / Forest |
| | **Order-Lagomorpha** | | | | | |
| 32 | Leporidae | Indian Hare | *Lepus nigricollis* | LC | Sch-IV | Forest, scrub land, plains. |
| | **Order-Soricomorpha** | | | | | |
| 33 | Soricidae | Madras tree Shrew | *Anathana ellioti pallida* | LC | Sch-V | Forest |
| 34 | Soricidae | House Shrew | *Suncus murinus* | LC | Sch-V | Urban |
| 35 | Soricidae | Pygmy White-Toothed Shrew | *Suncus etruscus* | LC | Sch-V | Mostly Cultivated areas. |

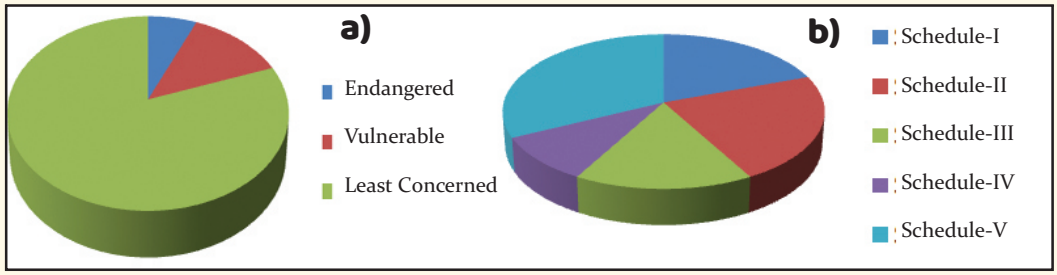


Figure- 1: a) IUCN Status b) WAP (1972) Status

**Acknowledgement**

Heartfelt thanks to Prakriti Shodh and Sanrakshan Welfare society members Anjal Nigam, Ravi Pandey, and Priyanshu Thakur for their invaluable participation in the core forest surveys, despite the numerous challenges posed by the jungle environment. We would like to express our appreciation to Alok Tiwari (DFO - Khairagarh), Kumar Shashi (DFO – Kawardha) and the Chhattisgarh Forest Department for their unwavering logistical support throughout the survey. We thank AmitPandey for his support; media aids mammalian surveys by raising awareness and enhancing data collection. Thanks are due for Dr. Anurag Vishwakarma for his scientific assistance, Ravi Naidu for his help in identifying the pugmarks, and our sincere gratitude also goes to Satyendra Sahu for sharing his remarkable tiger video with us.

## References

Brander, D.A.A. (1991): **Wild Animals in Central India**. Pub.: Natraj Publishers. P.267

CBSAP, 2003: **Chhattisgarh Biodiversity Strategy and Action Plan** (http; //forest .cg.gov.in)

Champion, H.G. & Seth, S.K. (1968): **A Revised Survey of the Forest Types of India**. Pub.: Government of India Press. Pp. 105.

Chandra, K. & Boaz, A.A. (2018): **Fauna diversity of Durg district, Chhattisgarh**. Pub.: State Forest Research and Training Institute, Forest Department, Chhattisgarh & Zoological Survey of India, Kolkata. Pp.427

Chandra, K. (2007): **Fauna of Madhya Pradesh (including Chhattisgarh). State fauna series, (Part-1)**. Pub.: Zoological Survey of India, Kolkata. Pp.1-564

Chunekar, H., Pardeshi, A., Gulawani, C. & Shinde, R. (2018): A note on colour variation in Common Palm Civet Paradoxurus hermaphrodites. *Small Carnivore Conserv.*, 55: 104-108

Harshey, D.K. & Chandra, K. (2001): Mammals of Madhya Pradesh and Chhattisgarh. *Zoo's Print J.*, 16(12):659-668.

IUCN (2016): Red list of Threatened species (www.iucnredlist.org 2019,e.T16724A22272037.

Jerdon, T.C. (1984): **Handbook of Mammals of India**. Pub.: Mittal Publications. P -5

Johnsingh, A.J.T. & Manjrekar, N. (2015): **Mammals of South Asia Vol-1&2**. Pub.: Universal Press, Hyderabad, P-739

Lydekker, R. (2005): **The Wild Animals of India, Burma, Malaya and Tibet**. Pub.: Natraj Publishers. Dehradun

Prater, S.H. (1971): **The Book of Indian Animals**. Pub.: Bombay Natural History Society. P- 316

Ranjitsingh, M.K. (1989): **The Indian Black Buck**. Pub.: Natraj Publishers. Dehradun

Sterndale, R.A. (1982): **Mammalia of India and Ceylon**. Pub.: Himalayan Books, New Delhi

Veron, G., Patou, M.L., Toth, M. & Jennings, A.P. (2015): How many species of paradoxurus are there? New insights from India and Sri Lanka. *J. Zool. Sys. Evo. Res.*, 53(2):161-174.

Wildlife Protection Act (1972): **Wildlife Protection Act** (Ed-1994). Pub.:Natraj Publishers, Dehradun

Wilson, D.E., Reeder, D.M. (2005): **Mammal species of the world. A taxonomic and geographic reference- 3rd ed**. Pub.: James Hopkins. University Press, Baltimore, MD; 2:1-2141.