

Telangana Biodiversity

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Editorial

India's rapidly expanding agricultural footprint and increasing human pressure are driving severe habitat degradation, threatening the survival of medium-sized carnivores, particularly the Indian jackal (*Canis aureus*). Once widespread across grasslands, scrub forests, and agro-pastoral landscapes, jackals are now experiencing significant range contraction and population decline due to habitat loss, retaliatory killings, and dwindling prey availability. The conversion of natural habitats into farmlands and urban settlements has fragmented ecosystems, forcing jackals into conflict-prone zones. As opportunistic foragers, they often raid crops or prey on livestock, leading to persecution by farmers. Additionally, indiscriminate use of pesticides and rodenticides has reduced their prey base while causing secondary poisoning. Unlike larger carnivores that receive conservation attention, jackals and other mid-sized species are frequently overlooked, despite their ecological role in controlling rodent populations and maintaining ecosystem balance. Climate change exacerbates these pressures, altering vegetation patterns and water availability in arid regions where jackals thrive. Without targeted conservation strategies—such as habitat corridors, mitigation of human-wildlife conflict, and legal protection—the Indian jackal may face localized extinctions. Addressing these challenges requires integrating wildlife-friendly practices into agricultural policies and raising awareness about the importance of mesopredators in India's rapidly changing landscapes.



Photo: Anand Dandekar

Briefly

Tracking the Lesser Florican's Elusive Journey

In a landmark study, scientists have unveiled the complex movement patterns and habitat preferences of the critically endangered lesser florican (*Sypheotides indicus*) in Gujarat, India. Using GPS telemetry on 10 individuals, researchers discovered that these elusive birds have small, overlapping home ranges averaging just 10.73 km², with a strong preference for multi-use agro-grassland mosaics. Surprisingly, despite being grassland specialists, they increasingly rely on croplands due to habitat fragmentation. The study also documented rare migratory behavior, with two birds crossing the Gulf of Cambay and covering distances up to 1,327 km monthly. This marks the first verified record of the species in northern Kutch, near the India-Pakistan border. Night light and human presence negatively impacted their occurrence, while open scrub habitats were largely avoided. The findings highlight the florican's fragile existence in a rapidly changing landscape, underlining the urgent need for conservation strategies that preserve both natural grasslands and low-intensity agricultural mosaics.

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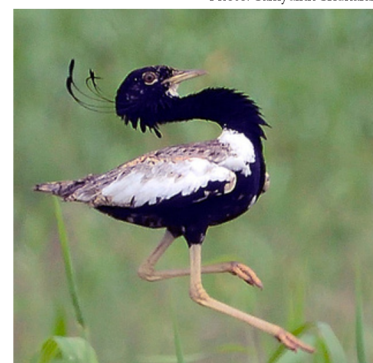
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Photo: Samyukth Sridharan



Special Feature

Kanha Tiger Reserve

Located in the Maikal range of the Satpuras in the heart of Madhya Pradesh, Kanha Tiger Reserve is one of India's most celebrated wildlife sanctuaries, renowned for its thriving population of Bengal tigers and its breathtaking landscapes. Spanning over a total of 2051 square kilometers, the reserve is a mosaic of sal (*Shorea robusta*) forests, grassy meadows, and rocky hills, making it one of the largest national parks in central India. The scenic Banjar and Halon valleys add to the park's natural splendor, while several streams provide essential water sources. The physiographical features of Kanha Tiger Reserve provide diverse habitats for its wildlife.

Kanha is home to a remarkable diversity of flora and fauna. The floral diversity is comprised of 850 species of angiosperms. Faunal diversity on the other hand includes, 500 species of insects, 26 species of reptiles, 300 species of birds and 43 species of mammals.

Significant species for the Kanha Tiger Reserve include the majestic tiger, leopard, sloth bear, dhole, and the iconic barasingha (*Rucervus duvaucelii*), commonly known as swamp deer, which was brought back from the brink of extinction through dedicated conservation efforts. Additionally, the reserve hosts gaur, sambar, chital, and bird species, including

the crested serpent eagle, Indian roller, and white-bellied drongo.

Established in 1955 as a national park and later designated a tiger reserve in 1973 under Project Tiger, Kanha has made significant strides in wildlife protection. The conservation program for the hard ground barasingha is a symbol of Kanha's success, being the only population of this subspecies in the world. Through habitat management, controlled breeding, and constant monitoring, the numbers have rebounded, making Kanha the "Land of the Barasingha." The reserve also focuses on tiger conservation through effective

Photo: Kandukuru Nagarjun

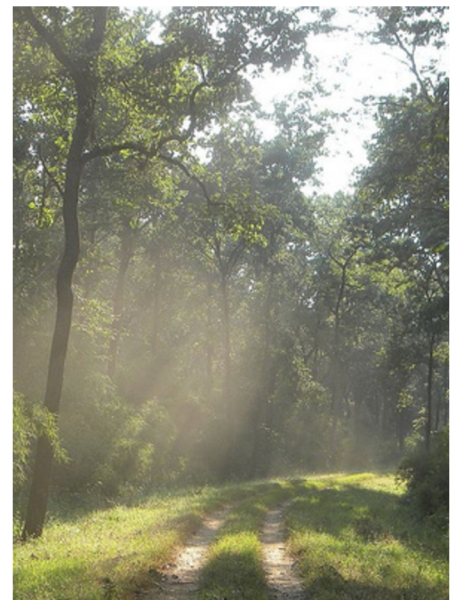


Photo: Ankit Saha

patrolling, habitat management, and community engagement. Anti-poaching measures and the involvement of local communities have significantly reduced threats, while sustainable tourism practices ensure that visitors experience the park without disturbing its delicate ecosystems. Additionally, the funds generated by tourism are used on priority for the development of the forest villages that had been relocated. This ensures well-being of local communities and continued involvement.

Kanha's success stories include the establishment of the Kanha Museum of Life and Art, which educates visitors about the region's tribal heritage and biodiversity.

The park's buffer zones are vital in reducing human-wildlife negative interactions and providing livelihood options to local communities. Moreover, Kanha is one of the first reserves in India to have a dedicated wildlife health monitoring system to keep track of animal well-being. While challenges and issues are being faced by the forest departments with respect to relocation of inhabitants from important tiger areas, Kanha continues to progress towards wildlife management going hand in hand with community involvement and well-being. This approach not only supports wildlife protection but also empowers local residents to become active participants in conservation.



Threatened Taxa

Plant - *Ceropegia pusilla* Wight & Arn.



Photo: P. Samyudurai

Taxonomy Order Gentianales; Family Apocyanaceae.

Geographic Range This is endemic to India being distributed in peninsular India.

State Distribution It is very rare and was reported from Adikmet hill in Hyderabad District.

Population Nothing is known about its population. It has been reported from one locality in Telangana State.

Habitat & Ecology This is a dwarf erect herb found growing on dry hilly area in scrub jungles and dry deciduous and thorny forest patches.

Major Threats This species is threatened due to habitat loss and destruction, and human encroachment.

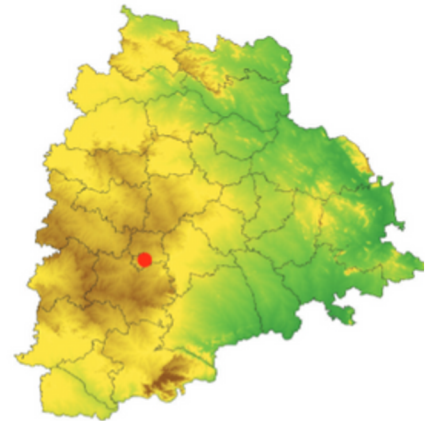
Use & Trade The species is not in trade.

Conservation Measures No species-specific conservation measures are in place.

Remarks

This species is found in forested areas. It does not occur in any protected area. This species is threatened by habitat destruction, and human encroachment. The estimated number of locations is 1; the estimated extent of occurrence (EOO) in Telangana State is <100 km², and the area of occupancy (AOO) is <10 km². There is an inferred continuing decline in the area, extent and quality of suitable habitat. At the global level this species has not been assessed. In Telangana State, this species is assessed as Critically Endangered with the criteria B1ab(iii,iv,v)+2ab(iii,iv,v)+D2.

Distribution in Telangana State



Animal - *Anhinga melanogaster* Pennant, 1769

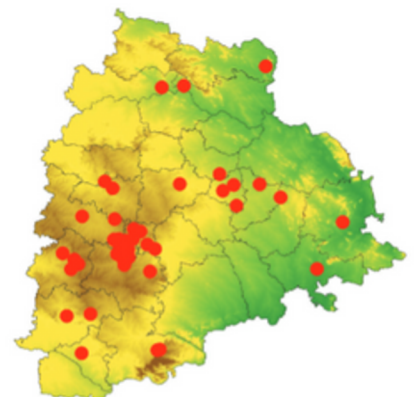
Courtesy Internet Resource



Remarks

This taxon is found in shallow inland wetlands including lakes, rivers, and reservoirs. It is threatened by habitat loss, and pollution of waterbodies. It is known from many locations. There is an inferred continuing decline in the area, extent, and quality of suitable habitat. At the global level, this taxon has been assessed as Near Threatened. In Telangana State, this species is assessed as Vulnerable, with the criteria B1ab(iii)+2ab(iii).

Distribution in Telangana State



Taxonomy Class Aves; Order Suliformes; Family Anhingidae.

Geographic Range This species is widely distributed through South and Southeast Asia. In India, it is widely but patchily distributed.

State Distribution Uncommon; distributed in many districts.

Population Sightings of this species have been on the decline. Nothing is known about its population status and trends.

Habitat & Ecology Inhabits shallow inland wetlands including lakes, rivers, and reservoirs.

Major Threats Threatened due to habitat loss, and pollution of waterbodies.

Use & Trade This species is not in trade.

Conservation Measures No known species specific conservation measures are in place for this species

Pioneers in Conservation

Padma Shri Parbati Barua

Parbati Barua, affectionately known as the "Hasti Kanya" or "Daughter of Elephant," is celebrated as India's first female elephant mahout and a pioneering conservationist. Born on March 14, 1953, into the royal family of Gauripur, Assam, she grew up surrounded by elephants. Inspired and influenced by her father, Late Prakritish Chandra Barua, she steered away from academics and decided to carry forward her father's dedicated efforts towards the care of elephants.

Barua began her remarkable journey at just 14, when she domesticated her first elephant in the Kochugaon forest of Assam. From 1975 to 1978, she mastered the traditional *Mela Shikar* method to tame 14 wild elephants, a practice that involves capturing elephants using a lasso rather than tranquilizers.



Courtesy : Internet Resource

Over the decades, she has trained more than 500 elephants, cementing her status as a legendary mahout. Beyond her direct work with elephants, Barua has also been instrumental in reducing human-elephant negative interactions. Recognizing her expertise and commitment to elephant care, she was awarded the Asom Gaurav, Assam's highest civilian award, in 2023, and the "Nature's Warrior" Jury Award at the Kolkata International Wildlife & Environment Film Festival (KIWEFF). Subsequently, the Government of India conferred the Padma Shri on Barua this year. Parbati Barua's story is not just about breaking gender barriers but also about a lifelong commitment to nurturing and caring for the wild. Her relentless efforts to protect elephants and train future generations of mahouts make her a true guardian of India's wildlife heritage.

Environment Education

Small Wings, Big Impact - Fireflies

Fireflies, also known as lightning bugs, belong to the family Lampyridae. These soft-bodied insects are beetles and are believed to have originally developed the ability to light up (known as bioluminescence) as a defense mechanism. Over years of evolution, this trait took on a new role — aiding in mate selection. One of the most beautiful phenomena involving fireflies occurs only in Southeast Asia, where the fireflies engage in synchronized flashing during twilight, creating a magical transformation of the landscape. Globally, around 2,400 species of fireflies are known, yet research on these insects remains limited in many regions, including India. Researchers around the world have observed that firefly populations are in rapid decline, due to light pollution, habitat destruction, and the excessive use of pesticides. Studies show that light from distant settlements spilling into forested areas can disrupt their mating signals and reduce the intensity of their flashes. Due to their heightened sensitivity to environmental change, they often serve as indicators of ecosystem health. Conserving fireflies is more than just preserving their captivating glow — it's about protecting entire ecosystems. With species possibly still unidentified and undiscovered, conservation action becomes crucial before we lose them to the dark.



Courtesy: Internet Resource

Nature for Kids

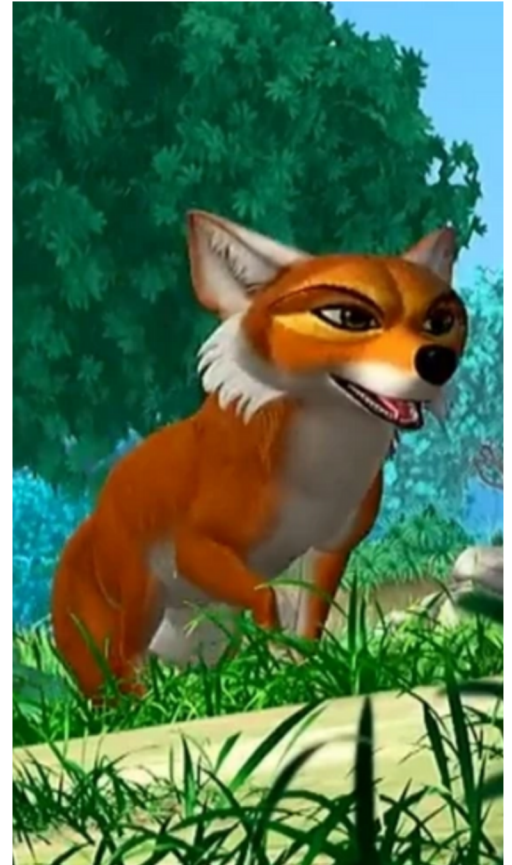
Tabaqui

In *The Jungle Book*, Tabaqui is a sneaky and cunning character who hangs around Shere Khan, the fearsome tiger. Tabaqui is portrayed as always looking for leftover food and causing trouble among the other animals. But did you know that Tabaqui is based on a real animal called the jackal? In India, the most common species is the Golden Jackal (*Canis aureus*), a clever and adaptable animal found in forests, grasslands, and even near villages and cities.

In the wild, they often scavenge leftover kills from larger predators like tigers or leopards, just like Tabaqui. However, they are also skilled hunters, catching small mammals and birds when available. Jackals are also interestingly known to eat fruits, berries, and seeds helping them survive even when food is scarce. Sometimes, they form pairs or small family groups to hunt together, displaying strong social bonds and teamwork.

Jackals are very important as scavengers. By eating dead animals, they help to keep ecosystems clean and reduce the spread of diseases to other animals and humans too. While Tabaqui in *The Jungle Book* is portrayed as a sneaky and untrustworthy side-character, real jackals are intelligent and strong animals that are crucial for maintaining ecological balance.

So, the next time you read about Tabaqui's antics, remember that real jackals aren't villains at all. They're clever, curious, and strong survivors with a vital role in nature. Just like every character in the jungle, they have their own story to tell — and it's one of adaptability and teamwork! Isn't it amazing how even the trickiest animals can be so important to the wild?



Source: Internet

Our Biodiversity

Nightjars of Telangana State

Nightjars are fascinating nocturnal birds that are well known for their incredible camouflage and silent, graceful flight. They belong to the family Caprimulgidae and are often seen during dusk and dawn. Their plumage is a mix of earthy browns, grays, and mottled patterns, perfectly mimicking fallen leaves or dry ground, making them nearly impossible to spot when they are resting.

India is home to a total of 11 species of nightjars. Telangana in particular hosts around 5 species, including the Indian Nightjar (*Caprimulgus asiaticus*), the Jungle Nightjar (*Caprimulgus indicus*), the Large-tailed Nightjar (*Caprimulgus macrurus*), the Jerdon's Nightjar (*Caprimulgus atripennis*) and the Savanna Nightjar (*Caprimulgus affinis*). These birds are commonly found in open woodlands, scrublands and grasslands, often resting on the ground during the day. At night, they take to the air, skillfully catching moths, beetles, and other flying insects with their wide, bristle-fringed mouths.

One of the most unique traits of nightjars is their repetitive calls. The Indian Nightjar, for instance, produces a continuous, rhythmic "chuk-chuk-chuk" sound that can be heard echoing through the quiet night. These vocalizations are essential for communication and attracting mates.

Like several birds, nightjars play an important ecological role as natural pest controllers by feeding on insects. However, they face threats from habitat loss, and are often victims of roadkills and accidental collisions with electrical lines. Their ground-nesting behavior leaves their eggs and chicks especially vulnerable. In some areas, excessive artificial lighting disrupts their natural foraging patterns. Given their sensitivity to human-induced threats, it becomes imperative to implement conservation measures and mitigate anthropogenic impacts to ensure the survival of these elusive nocturnal birds.



Photo: Abhijeet Ramesh Jagtap

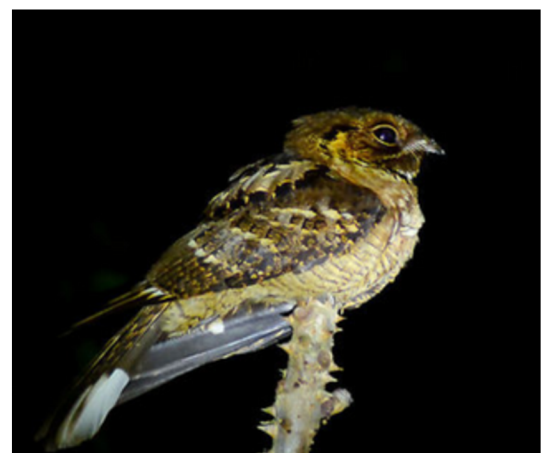


Photo: Abhijeet Ramesh Jagtap

Feature - Flora

Amla - *Phyllanthus emblica* L.

Classification

Kingdom: Plantae
Division: Tracheophyta
Class: Magnoliopsida
Order: Malphigiales
Family: Phyllanthaceae
Genus: *Phyllanthus*
Species: *emblica*
Authority: L.



The Amla (*Phyllanthus emblica*) tree is a small to medium-sized deciduous tree with a height of 8 to 18 meters, that is well-known for its edible fruit of the same name. Simple, almost stalkless leaves are arranged closely along thin branchlets. Amla flowers are tiny and either pink or greenish-yellow in colour. The berries have six vertical stripes or furrows, are spherical, smooth, hard, and light greenish yellow. They ripen in the autumn season. Amla has a fibrous taste that is sour, bitter, and astringent. Amla is widely distributed in tropical and sub-tropical countries.

Courtesy: e-Flora India website

Feature - Fauna

Common Leopard - *Panthera pardus* Linnaeus, 1758

Classification

Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Carnivora
Family: Felidae
Genus: *Panthera*
Species: *pardus*
Sub-species: *P.p. fusca*
Authority: Meyer



Panthera pardus fusca - a subspecies of the Common Leopard (*Panthera pardus*), commonly known as the Indian Leopard to differentiate from the African subspecies – *Panthera pardus pardus*. This is the smallest of the big cats having yellowish to dark golden fur with black spots grouped into rosettes. It is adapted to a variety of habitats, is extremely agile, hunts its prey using stealth and ambush and is known to carry its prey onto the trees which it uses for resting, feeding and locomotion. It is solitary, and gives birth to 2-3 cubs after a gestation period of 90-105 days. It is threatened due to habitat loss leading to increasing human-wildlife conflict, and poaching. The highest leopard populations are concentrated in Madhya Pradesh, Maharashtra, Karnataka, and Tamil Nadu.

Courtesy: DP Photography

Events

Amateur Naturalist Training - Night Walk



Photo Courtesy: WWF-India, TS&AP Chapter

The Telangana State Forest Academy is located in Dulapally village of Ranga Reddy district at a distance of 24 km from Hyderabad city. National level workshops and training programmes including one-week compulsory training courses for IFS Officers and Forest Range Officers from various parts of the country are organised in the Academy. On July 9th 2024, a lecture followed by a night walk by Prof. C. Srinivasulu, of Osmania University, Hyderabad, for training the forest range officers of the states of Assam, and other northeast Indian states was organized. They were made aware of the rich diversity, distribution and status of chiropteran fauna of India, their food, feeding habits, roosting and breeding while highlighting their presence as being vital for the health of the ecosystem. The young officers were taken out on a bat walk after nightfall delighting them with live hearing of the echolocation calls emitted by the insectivorous bats flying in the night sky.

News

First satellite-tagging of the Ganges Dolphin



Photo Courtesy: Shutterstock

In a groundbreaking move for wildlife conservation, scientists from the Wildlife Institute of India (WII) have successfully tagged a male Ganges River Dolphin and released it into the Brahmaputra River in Assam. This marks the first-ever instance of satellite tagging of any species in India. The technology will provide crucial insights into the seasonal movements, migratory patterns, range, distribution, and habitat utilization of this endangered species, helping develop targeted conservation strategies. Once numbering in the tens of thousands, the population of Ganges River Dolphins has plummeted to less than 2,000 due to habitat loss, pollution, and unsustainable fishing practices. Approximately 90% of the remaining population is found in India. By tracking these dolphins, scientists aim to better understand their behavior and ensure their survival in the wild.

Signing Off

Keeping the wilderness connected

Wildlife corridors are nature's highways, allowing populations of species to move freely, maintain their home range and stay connected between fragmented habitats in search of food, mates, and shelter. Increasing human disturbance is the most notable contributor to the fragmentation of wild habitats. Anthropogenic activities continue to divide natural landscapes with roads, farms, and urban developments. In such a scenario, wildlife corridors become vital for maintaining ecological balance. They help species like elephants, tigers, and leopards navigate through human-dominated landscapes and experience minimal negative-interactions with humans. In India, corridors like the Kaziranga-Karbi Anglong corridor in Assam and the Nilgiri Biosphere Reserve in Tamilnadu are crucial for wildlife movement. These passages enable animals to migrate and disperse. Most importantly, it helps maintain genetic diversity — a key factor in the long-term survival of populations. Protecting these corridors ensures that isolated wildlife populations remain connected, reducing the risk of inbreeding and local extinctions. However, maintaining these green pathways is not easy. Encroachment, infrastructure projects, and the long standing debate of development versus conservation threaten their effectiveness. Conservation efforts now focus on restoring degraded wildlife corridors, building wildlife crossings, and involving local communities in protecting these routes.

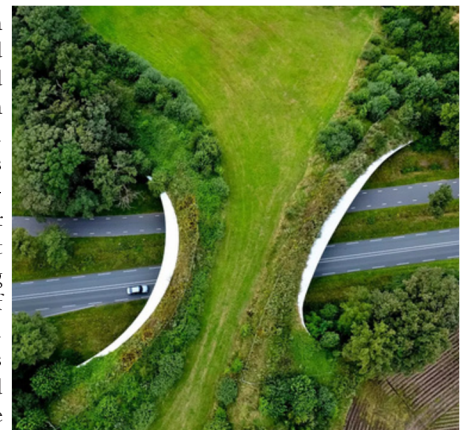


Image Courtesy: Indiatimes

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