

Telangana Biodiversity

Vol. 7 Issue 2

Apr-Jun, 2026

A Newsletter of Centre for Biodiversity and Conservation Studies, Osmania University

Editorial

The past year has served as a stark reminder that climate change is no longer a distant possibility. It is a present-day reality. Across India, extreme flood-events, prolonged dry spells, and droughts have affected both people and wildlife, while around the world, record-breaking temperatures and heatwaves have increased. These events are not isolated incidents but part of a growing pattern that scientists have long warned about. As ecosystems come under mounting pressure, species are being forced to adapt, shift their ranges, or face local decline, while communities everywhere are learning to cope with an increasingly unpredictable climate. Yet, amidst these challenges lies hope. Around the world, people still working relentlessly in the face of despair, for ecological restoration, climate science, and community-led conservation are demonstrating that meaningful action is possible. The resilience of nature is extraordinary, but it cannot stand alone. With informed policies, scientific innovation, and collective responsibility, we still have an opportunity to build a future where both people and the natural world can repair and heal in the face of a changing climate.



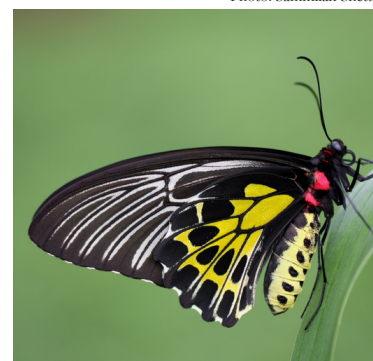
Photo: WWF-UK

Briefly

First record of the Southern Birdwing for Telangana

Telangana State received its first record of the Southern Birdwing butterfly - *Troides minos*. It is a butterfly species which is mainly found in the Western Ghats and infrequently recorded from the Eastern Ghats as well. It is endemic to parts of southern India and is one of the largest butterfly species in the country. This first sighting in the Amrabad Tiger Reserve here in Telangana is a surprise and also raises questions about the species known range and ecology. The sighting was made in the Kollapur Range by Forest Department officials and researchers, extending the known distribution of this iconic species beyond its stronghold in the Western Ghats. The discovery highlights the rich yet incompletely documented butterfly diversity of the Nallamala Hills and the Amrabad Tiger Reserve. Researchers note that the finding emphasizes the value of systematic biodiversity surveys and long-term monitoring, which continue to reveal previously undocumented species records and improve our understanding of species distributions, habitat connectivity, and conservation priorities.

Photo: Sammilan Shetty



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Email

biodiversityclub@osmania.ac.in

Special Feature

Anamalai Tiger Reserve

Nestled in the southern reaches of the Western Ghats, the Anamalai Tiger Reserve is one of India's most ecologically significant protected areas. Located in Tamil Nadu within the Anamalai Hill Range, the reserve spans approximately 1,479 km². Formerly known as the Indira Gandhi Wildlife Sanctuary and National Park, it was declared a tiger reserve in 2008 under Project Tiger. The reserve shares important ecological boundaries with Parambikulam Tiger Reserve in Kerala, as well as Eravikulam National Park and Chinnar Wildlife Sanctuary, together forming one of the largest contiguous forest landscapes in the Western Ghats.

Anamalai exhibits remarkable habitat diversity owing to its wide altitudinal range, extending from around 300 metres to over 2,500 metres above sea level. The reserve holds tropical evergreen forests, semi-evergreen forests, moist deciduous forests, dry deciduous forests, montane shola forests, high-altitude grasslands, and riparian habitats. Numerous perennial streams and rivers, including tributaries of the Aliyar and Amaravathi rivers originate within, making the reserve an important watershed for southern India.

The floral diversity of ATR includes around 2500 angiosperms, with wild varieties of popular cultivated species like

mango, banana, ginger, pepper and cardamom being found here. The higher elevation shola grasslands typical of the Western Ghats are home to several endemic orchids, and balsam species.

ATR is home to around 70 fish species, 70 amphibian species, 120 species of reptiles, 300 species of birds, and 80 species of mammals. Some important mammals apart from the charismatic ones, seen here are the Smooth-coated and Small-clawed Otters, civet cats, and various species of mongoose and the Lion-tailed Macaque. Birds include Western Ghat endemics like the Malabar-pied Hornbill and the Malabar

Photo: Jazeem Hamza



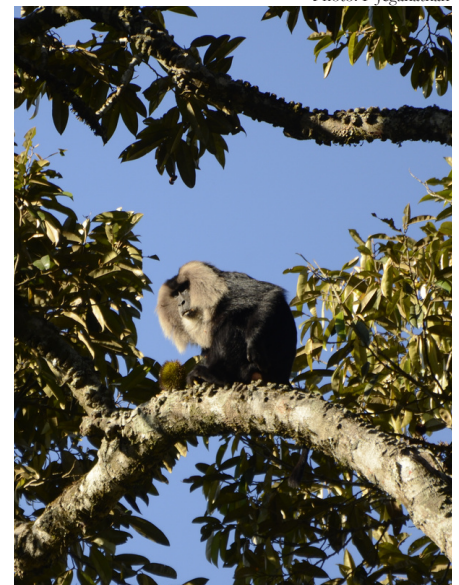
Photo: P Jeganathan

Trogon. The Anamalai Wood Snake is an endemic non-venomous snake found only in three localities in the Anamalai range including ATR.

Conservation in Anamalai involves anti-poaching measures, monitoring programmes, habitat restoration, invasive species management, and fire prevention programmes. A major strength of the reserve is the involvement of indigenous communities, particularly the Kadar, Malasar, Mudugar, and Pulayar tribes, who have significantly contributed to forest protection, eco-development activities, and conflict mitigation. Eco-development committees promote sustainable livelihood

while reducing dependence on forest resources.

ATR's crucial and irreplaceable role in the southern Western Ghats is its connectivity to neighbouring protected landscapes. The preservation and integrity of the Anamalais in this context is highly critical to maintain habitat connectivity and contiguity in a region like the Western Ghats which is home to some pristine remaining natural habitats and rich biodiversity, but also at the same time is facing extreme pressures from habitat fragmentation and anthropogenic disturbance.



Threatened Taxa

Plant - *Pueraria tuberosa* (Willd.) DC.



Photo: Dinesh Valke

Taxonomy Order Fabales; Family Fabaceae.

Geographic Range Endemic to India; and is distributed throughout.

Distribution Occasional; known from Komaram Bheem Asifabad, Mahabubabad, Nagarkurnool, Nizamabad, Vikarabad, and Peddapalli districts.

Population Nothing is known about its population status or trends.

Habitat & Ecology Large perennial climber, found in dry and moist deciduous forests.

Major Threats Threatened due to habitat loss and destruction, and collection for local medicinal purposes.

Use & Trade The species is in trade locally, for its medicinal properties.

Conservation Measures No species-specific conservation measures are in place. This species is reported from Amrabad Tiger Reserve.

Remarks

This species is found in dry deciduous and moist deciduous forests. It occurs in Amrabad TR. It is threatened by habitat destruction, and over-collection for local medicinal purposes. It is found in 6 localities. The estimated extent of occurrence (EOO) in Telangana State is >25,000 km², and the area of occupancy (AOO) is <100 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 Vulnerable, with the criteria A2d+B1ab(iii)+2ab(iii).

Distribution in Telangana State



Animal - *Lycodon flavicollis* Mukherjee & Bhupathy, 2007



Photo: Gundu 747310 iNaturalist

Taxonomy Class Reptilia; Order Squamata; Family Colubridae.

Geographic Range Endemic to India; and is known from western India including Telangana State.

Distribution Rare; known from Hyderabad, Rangareddy, Medchal-Malkajgiri, Sangareddy, Nizamabad, Wanaparthy, and Peddapalli districts.

Population Nothing is known about its population status and trends..

Habitat & Ecology Found in tropical dry deciduous forest, urban areas, and heavily degraded forest patches (Avinash, V. pers. obs.). Prefers rocky areas, and hides among crevices in rocks and boulders. It is nocturnal, and feeds on geckos and skinks.

Major Threats Threatened due to habitat loss and fragmentation.

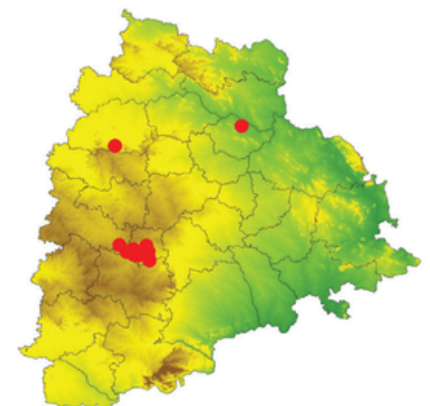
Use & Trade This species is not in trade.

Conservation Measures There are no known species-specific conservation measures in place for this species.

Remarks

This taxon is found in dry deciduous forests, near human habitation and in heavily degraded forest patches. It is not known from any protected areas in Telangana State. It is threatened by habitat loss and fragmentation. It is rare in occurrence. It is known from few localities. The estimated extent of occurrence (EOO) in Telangana State is <20000 km², and the area of occupancy (AOO) is <1000 km². There is an inferred continuing decline in the area, extent, and quality of suitable habitat. This taxon has not been assessed at the global level. In Telangana State, this species is assessed as Vulnerable, with the criteria B1b(iii).

Distribution in Telangana State



Pioneers in Conservation

Padma Shri Himmat Ram Bhambhu

Popularly known as the "Tree Man of Rajasthan," Himmat Ram Bhambhu is a farmer, environmentalist, and grassroots conservationist whose lifelong dedication has transformed degraded landscapes into thriving habitats. Born in Nagaur district, Rajasthan, Bhambhu began his conservation journey in the 1970s, inspired by the simple act of his grandmother planting a tree. Over the following decades, he planted and nurtured more than 300,000 native trees, including drought-resistant species such as khejri, neem, and acacia, across the arid districts of Rajasthan. One of his most remarkable achievements was converting nearly 34 bighas of barren land into a flourishing biodiversity refuge that today supports peacocks, chinkaras, blackbucks, numerous bird species, and other native wildlife.

Beyond afforestation, Bhambhu has actively worked against wildlife poaching and illegal trade, rescuing injured birds and mammals and supporting enforcement agencies in protecting Rajasthan's wildlife. His efforts have also led to the recognition of important conservation areas and



Photo: GODL - India

inspired community participation. His work demonstrates how ecological restoration and wildlife conservation can be driven by local communities through persistence and stewardship rather than large-scale intervention alone. For his outstanding contributions to environmental conservation, Himmat Ram Bhambhu received the Padma Shri in 2020. His accolades also include the Rajiv Gandhi Environment Protection Award (2014) and the Rajasthan State Amrita Devi Vishnoi Award (2003).

Environment Education

Are Nights Truly Dark Anymore?

For millions of years, life on Earth evolved under predictable cycles of daylight and darkness. Today, however, artificial light at night (ALAN) has become one of the fastest-growing, most disruptive yet overlooked forms of environmental pollution. Excessive illumination from streetlights, buildings in cities, industries, and vehicles disrupts the natural behaviour of countless species. The foraging patterns of nocturnal mammals like bats are impacted, birds become disoriented by brightly lit skylines, sea turtle hatchlings move away from the sea and lose their sense of direction, and insects especially fireflies have their mating rituals and communication signals disrupted, forcing them to light brighter and brighter. Even plants can experience altered flowering and growth cycles under prolonged illumination. This gradual loss of natural darkness threatens biodiversity, while also impacting the physical and mental health of us humans in various ways. As cities continue to expand, preserving dark skies through responsible lighting, reduced light spill, and wildlife-friendly illumination should become an integral part of nature awareness and conservation action. A major part of this change is the acceptance of natural darkness in our surroundings and allowing the night to remain dark as Nature has intended.



Photo: Kobayashi Kiyochika (Japan, 1847-1915)

Nature for Kids

The Small Cats of India

When we think of wild cats, tigers and lions usually come to mind. But did you know that India is also home to many smaller wild cats that are just as fascinating? These secretive hunters may not be as large as their famous cousins, but they are incredibly skilled, even more difficult to spot and play just an important role as any other carnivore.

One of the most widespread is the Jungle Cat, which can be found in grasslands, wetlands, forests, and even farmland. It looks a little like a tall domestic cat, but with long legs, large pointed ears, and a short black-tipped tail. The beautiful Leopard Cat, with its spotted coat, lives in forests across the Himalayas, Northeast India, and the Western Ghats. It is an excellent climber and spends much of its time hunting at night.

In the dry deserts of western India lives the Desert Cat, perfectly adapted to sandy landscapes with its pale coat that blends into its surroundings. High in the cold Himalayan mountains roams the fluffy Pallas's Cat, famous for its round face, thick fur, and grumpy-looking expression! Another remarkable species is the Rusty-spotted Cat, one of the smallest wild cats in the world. Growing to only about the size of a domestic kitten, this tiny predator lives in forests and rocky areas of central and southern India, where it hunts frogs, lizards, and small rodents. India is also home to the elusive Fishing Cat, a cat that loves water! It is an excellent swimmer and catches fish, frogs, crabs, and even small water birds from marshes, mangroves, and wetlands. Its partially webbed feet make it perfectly suited for this watery lifestyle.

Many of them are threatened by habitat loss, and negative-interactions with people. Although these cats are small, they are super predators in their own habitats. The next time you hear someone talk about India's wild cats, remember it isn't just about tigers and lions! These beautiful small cats are among the country's most remarkable wildlife treasures out there.



Photo: Kelinahandbasket



Photo: David V Raju

Our Biodiversity

Accipitrids of Telangana State

The family Accipitridae comprises some of the world's most magnificent birds of prey, including eagles, hawks, kites, harriers, buzzards, and vultures. Telangana supports a rich diversity of these aerial predators, with 35 species recorded across the state. Among the most charismatic raptors are the majestic Crested Serpent Eagle, Changeable Hawk-Eagle, Bonelli's Eagle, Black Eagle, Shikra, Black Kite, Brahminy Kite, and migratory harriers such as the Western Marsh Harrier and Pallid Harrier. Telangana also supports several species of vultures, including the critically endangered White-rumped Vulture, Indian Vulture, and the impressive Red-headed Vulture, all of which perform the indispensable ecological role of scavenging.

Accipitrids represent one of the most successful groups of predatory birds, having diversified over millions of years into highly specialized hunters. Their eyesight which is up to eight times sharper than that of humans, allows them to detect prey from remarkable heights. Powerful talons, hooked beaks, broad wings, and exceptional soaring abilities have enabled different species to occupy diverse ecological niches. Some species, such as the Black Kite and Shikra, have adapted well to cities, exploiting urban food resources and nesting opportunities. Others, including large eagles and vultures, remain heavily dependent on extensive natural habitats and healthy ecosystems. Ecologically, these raptors play a vital role in maintaining ecosystem health. Eagles, hawks, and harriers regulate populations of rodents, reptiles, birds, and other small vertebrates, helping maintain balanced food webs. Vultures, on the other hand help in disposing of animal carcasses and preventing the spread of diseases. Their presence is often considered an indicator of a healthy ecosystem with intact trophic interactions.

Many accipitrids face growing threats across Telangana and India. Habitat fragmentation, the loss of nesting trees, electrocution on power lines, collisions with wind turbines, pesticide contamination, declining prey populations, and accidental poisoning continue to affect these species, despite their adaptability and resilience.



Photo: Afsar Nayakkan



Photo: Tisha Mukherjee

Feature - Flora

Thick-Leaf Lavender - *Coleus strobilifer* (Roxb.) A.J.Paton

Classification

Kingdom: Plantae
Division: Streptophyta
Class: Equisetopsida
Order: Lamiales
Family: Lamiaceae
Genus: *Coleus*
Species: *strobilifer*
Authority: (Roxb.) A.J.Paton



Coleus strobilifer is a flowering annual herb, native to regions the Indian subcontinent and South-east Asia. It is an exceptionally resistant herb growing under full sunlight, in rock crevices and rocky Deccan grasslands in Telangana. Elsewhere, it is found from the high-elevation habitats of the Western Ghats and the Himalayas, to plateau grasslands and forest edges. It is recognized by its minty aroma and distinct lavender blooms that give the landscape a beautiful lavender-hue, giving it the name *Induparni* in Sanskrit. The leaves are oblong to circular having a velvety texture. The flowers are borne on spikes and the flowering season falls in the months of September to October. *Coleus strobilifer* is extensively used in folk medicine to treat cold and cough, and other common infections. It is known as కర్పూర వల్లి (*Karpuravalli*) in Telugu.

Photo: Dinesh Valke

Feature - Fauna

Blue-eyed Malkoha - *Phaenicophaeus viridirostris* (Jerdon, 1840)



Classification

Kingdom: Animalia

Phylum: Chordata

Class: Aves

Order: Cuculiformes

Family: Cuculidae

Genus: *Phaenicophaeus*

Species: *viridirostris*

Authority: (Jerdon, 1840)

Phaenicophaeus viridirostris is a medium-sized bird belonging to the cuckoo family Cuculidae, measuring about 40–45 cm in length, much of which is accounted for by its long, graduated tail. It is identified by its distinct patch of bright cobalt-blue bare skin surrounding the eyes and a crimson-red iris. It has glossy greenish-black plumage with a metallic sheen, a pale bluish-grey bill, and a pale-grey belly. This bird is majorly found in the semi-evergreen, deciduous and scrub forests of Peninsular India and in the plains of Sri Lanka. Unlike other cuckoos, it is not a brood-parasite. It also does not show sexual dimorphism, with the two sexes being alike. The young ones are dull and have a non-glossy plumage. Blue-eyed malkohas are silent birds and produce a low *kraa* sound when flushed. They feed extensively on insects. It seems to be well-adapted to urban green spaces.

Photo: Hari K Patibanda

Events

Bat Walk with HYTICOS



Photo: CBCS, OU

On the 28th of June, 2026, CBCS in collaboration with the Hyderabad Tiger Conservation Society (HYTICOS) organized a bat walk as part of the Last Urban Natural Green Spaces (LUNGS) initiative, at the KBR National Park. It was led by Dr. Aditya Srinivasulu, who guided a group of curious participants ranging from adults to children, introducing them to the world of bat behaviour, and biology, echolocation and a demonstration of how bat-detector tools work. This was followed by a trail into the KBRNP premises where around 8 species of bats were detected. Participants got to observe the bats in flight, and their flight patterns. The walk was enriched by the many curious and interesting questions that participants asked and discussed, making it a fun and successful walk.

News

Three new species of Himalayan Pit-viper discovered

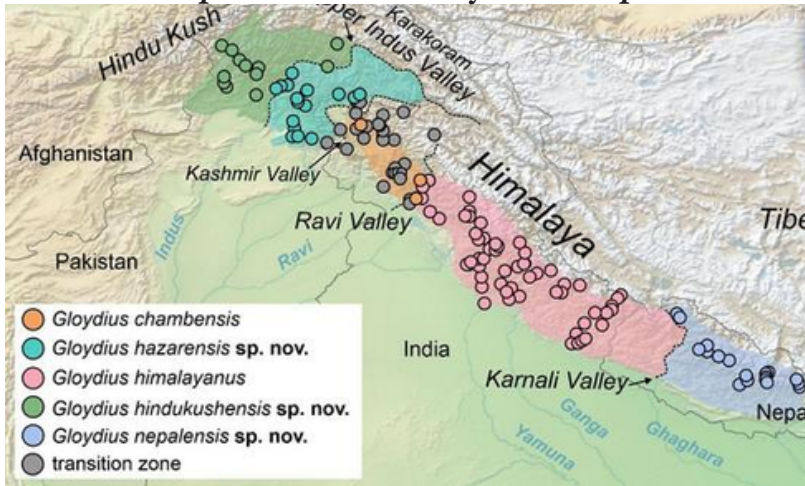


Photo: Dr. Daniel Jablonski, via Mongabay

A multinational team of researchers led by Dr. Daniel Jablonski, in collaboration with scientists from museums and research institutions across Europe and Asia, has revealed that the Himalayan Pit Viper (*Gloydius himalayanus*), long considered a single widespread species, actually represents five distinct species. Alongside the already recognized *Gloydius himalayanus* and *Gloydius chambensis*, the study describes three species new to science - *Gloydius himalayanus*, *Gloydius swild*, and *Gloydius gilgitensis*, using DNA extracted from historical museum specimens alongside modern genetic analyses. The findings highlight the immense hidden biodiversity of the Himalayas and demonstrate the indispensable role of museum collections and integrative taxonomy in uncovering cryptic species and guiding future conservation efforts.

Signing Off

Is Conservation Inclusive of Indigenous Communities?

India's journey through biodiversity-conservation has crossed significant milestones and landmarks. Similar to global regions where conservation is deeply tied to communities, a complex and often uncomfortable question is often faced: who bears the cost of conservation? Many of India's forests have been inhabited and managed by indigenous and tribal communities for generations, whose traditional ecological knowledge has been in reciprocity with these landscapes long before modern conservation policies emerged. However, the creation of protected areas has, at times, resulted in restrictions on access to forests, and relocation of communities, which severely disrupts individual and community life and health. Although legislation seeks to recognize customary rights, integrating indigenous community well-being and basic human rights with biodiversity conservation continues to be a subject of debate. How can biodiversity be protected in ways that are both ecologically effective and socially just? The answer is unlikely to be simple, but it is one that deserves systematic science, continued dialogue, and collaboration.



Photo: Drashokk

We hope you have enjoyed this issue... If you wish to share any information, please do not hesitate to contact us.



Centre for Biodiversity and Conservation Studies

A Centre of Excellence under MHRD-RUSA 2.0 at Osmania University

#F5, First Floor, CFRD Building, Osmania University, Hyderabad- 500007, TS

Visit us at: www.osmania.ac.in/rusa2/cbs

Email: biodiversityclub@osmania.ac.in