Telangana Biodiversity

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Editorial

The developing El Niño of 2026 is a reminder of how climate change events unfold and can have far-reaching consequences for the globe. Characterised by the unusual warming of surface waters in the central and eastern tropical Pacific Ocean, El Niño alters global atmospheric circulation and is often associated with weaker southwest monsoon rainfall over India. This year, its effects have been particularly concerning: India's 2026 monsoon ended with a rainfall deficit of approximately 13%, making it the driest in 11 years, with all southern states receiving below-normal rainfall. The consequences extend beyond a failed monsoon, threatening agricultural productivity, groundwater replenishment, drinking-water availability and rural livelihoods, while potentially intensifying heat stress and food-price pressures. Forecasts indicate that the current event could remain strong into early 2027, raising concerns about warmer-than-usual conditions in the coming months. As climate variability intensifies against the backdrop of global warming, the question is no longer simply whether we can predict these events, but whether our agricultural systems, water-management practices and ecosystems are resilient enough to withstand them.

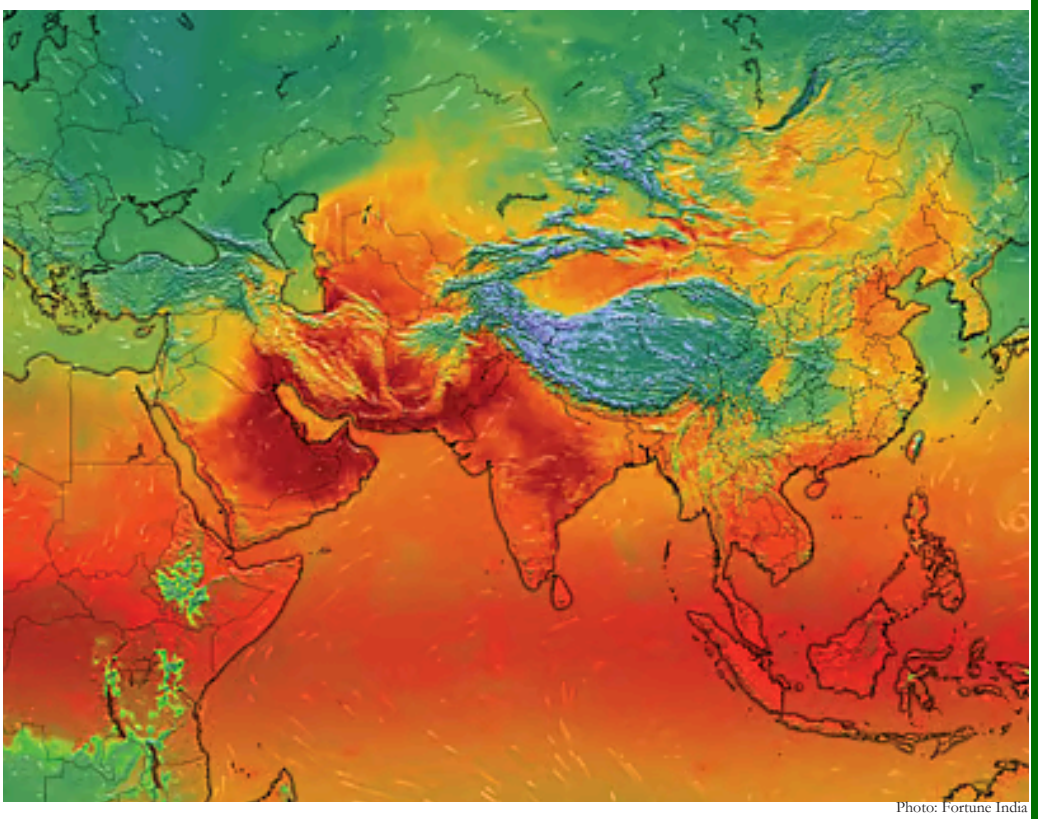


Photo: Fortune India

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Briefly

New Plant Species Discovered from Telangana's Wetlands

A new freshwater flowering plant, *Ammannia telanganensis*, has been discovered in Telangana and named in honour of the state. Belonging to the Lythraceae family, the species was recorded in wet habitats in Rangareddy district and Amrabad Tiger Reserve, Nagarkurnool. Distinguished by its magenta petals, stalked flower clusters and uniquely patterned, brain-like seeds, the plant grows along seasonal streams and the edges of water bodies. Interestingly, its description also raises a taxonomic question surrounding *A. cordata*: although the original description of that species mentions four petals, researchers found petals consistently absent in the authentic herbarium specimens and field collections they examined. They suggest that some specimens previously identified as *A. cordata* may actually belong to *A. telanganensis*. The newly described species is currently classified as Data Deficient, highlighting the need for further surveys to establish its distribution and population status, and the importance of conserving the small wetlands and seasonal streams it inhabits.

Photo: Parthiban et al. 2026



Special Feature

Similipal National Park

Similipal National Park in Mayurbhanj district of Odisha became India's 107th national park in April 2025. The notified national park covers 845.70 sq km. It forms part of the larger Similipal Tiger Reserve, which covers 2,750 sq km, including a 1,194.75 sq km core area. Similipal was among India's first nine tiger reserves, notified under Project Tiger in 1973. The wider landscape is also recognised as a Biosphere Reserve under UNESCO's World Network of Biosphere Reserves.

Similipal lies in the Deccan Peninsular biogeographic zone. Its ecological importance comes from the meeting of different biogeographic elements. The landscape contains species and forest communities with affinities to the Western Ghats, Eastern Ghats and the eastern Himalayan region. Its flora also shows a link between southern India and the sub-Himalayan north-east. Extensive sal forests occur across the landscape, along with moist deciduous, semi-evergreen, hill and grassland habitats. The Similipal hills rise to 1,168 m at Khairiburu. Numerous perennial streams originate in the hills and contribute to river systems such as the Budhabalanga and Baitarani.

Similipal supports a rich assemblage of plants and animals. The Tiger Reserve records 1,352 plant species, including 101 orchid species, along with 55 mammal, 361 bird and 62 reptile species. Important mammals include Bengal Tiger (*Panthera tigris tigris*), Asian Elephant (*Elephas maximus*), Gaur (*Bos gaurus*), Leopard (*Panthera pardus*), Sambar (*Rusa unicolor*) and Chital (*Axis axis*). Similipal is especially known for its pseudo-melanistic Bengal Tigers, which have unusually broad and merged dark stripes. This distinctive form is associated with a genetic variation and is particularly characteristic of the Similipal population.

Similipal has been part of Project Tiger since 1973. The tiger population increased from 8 tigers in 2018 to 16 in the 2022 All India Tiger Estimation. State assessments recorded 27 adult tigers in 2023–24 and 35 adults in 2026.

Photo: Yohannvt

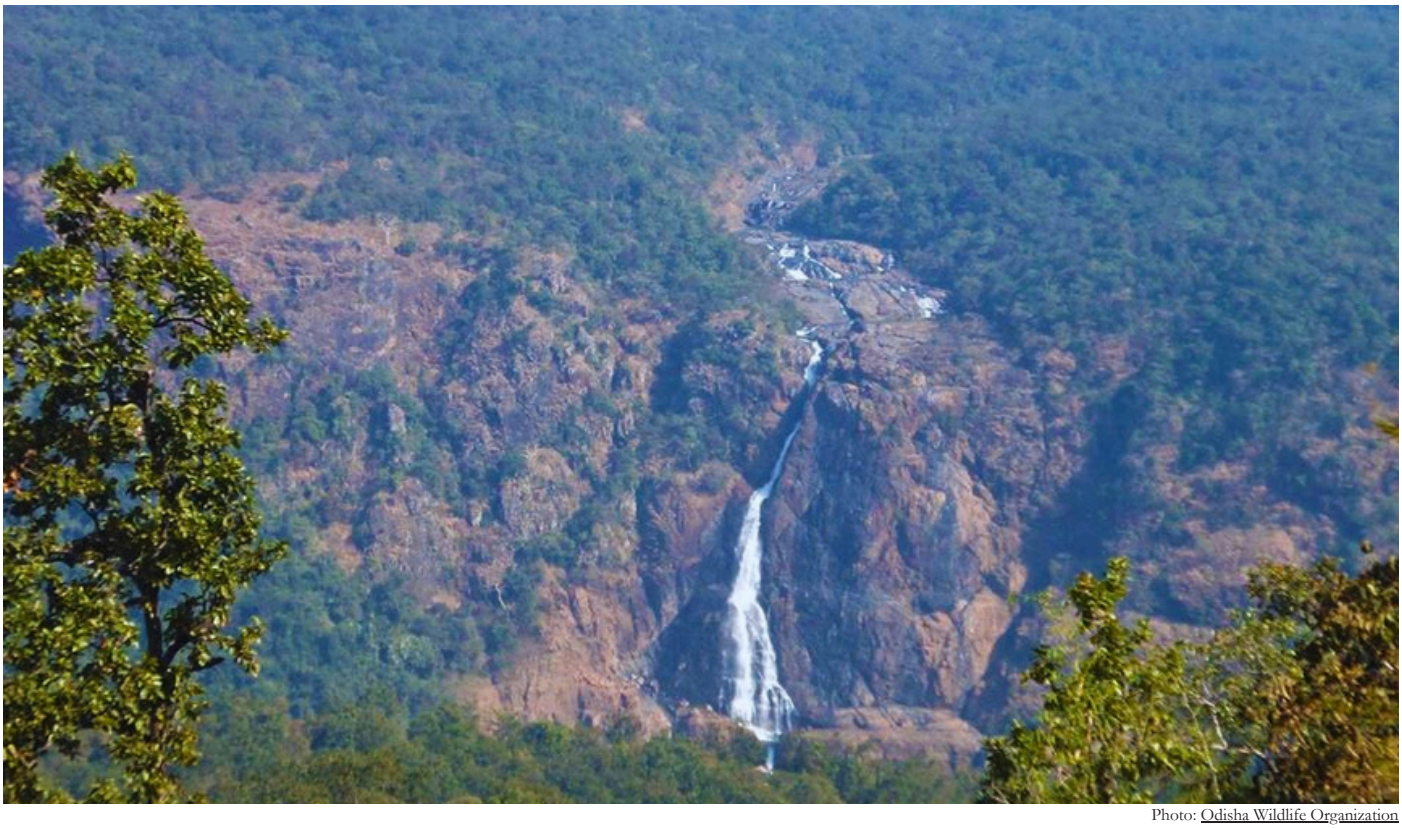


Photo: Odisha Wildlife Organization



Similipal faces pressure from forest-resource collection, fires, poaching, habitat fragmentation and settlement expansion. Its protection is supported through National Park and Tiger Reserve status, with habitat management, wildlife monitoring, anti-poaching measures and scientific research forming key conservation approaches. Indigenous communities, including Santal, Kolha, Ho, Bhumija, Gond, Khadia, Mankidia and Lodha communities, depend on the landscape for agriculture and forest-based livelihoods. Community-based ecotourism and livelihood initiatives therefore have an important role in reducing forest dependence while strengthening local participation in conservation.

Similipal is more than a refuge for tigers and elephants. Its forests, rivers, plants and diverse wildlife form an interconnected ecosystem that supports ecological processes across the landscape. Protecting Similipal therefore requires conserving its habitats and natural processes while working with local communities. Its continued protection is essential for safeguarding one of India's important forest landscapes.

Threatened Taxa

Plant - *Paederia foetida* L.

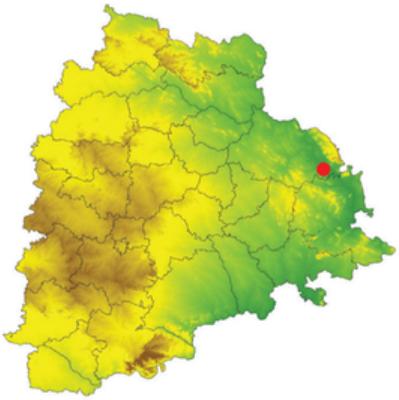


Photo: Forest & Kim Starr

Taxonomy Order Gentianales; Family Rubiaceae.
Geographic Range Widespread, distributed throughout the Indian subcontinent. It is distributed throughout India.
Distribution Rare; known from Malluru Gutta in Jayashankar Bhupalapalli district.
Population Nothing is known about its population status or trends.
Habitat & Ecology Perennial, twining vine, found in moist deciduous forests.
Major Threats Threatened due to habitat loss and destruction, and over-collection for local medicinal purposes.
Use & Trade The species is in trade, used in local medicine.
Conservation Measures No species-specific conservation measures are in place.

Remarks
This species is found in moist deciduous forest. It does not occur in any protected areas. It is threatened by habitat destruction and overcollection for local medicinal use. The estimated number of localities 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 A2d+B1ab(iii)+2ab(iii)+D2.

Distribution in Telangana State



Animal - *Sypheotides indicus* (Miller, 1782)

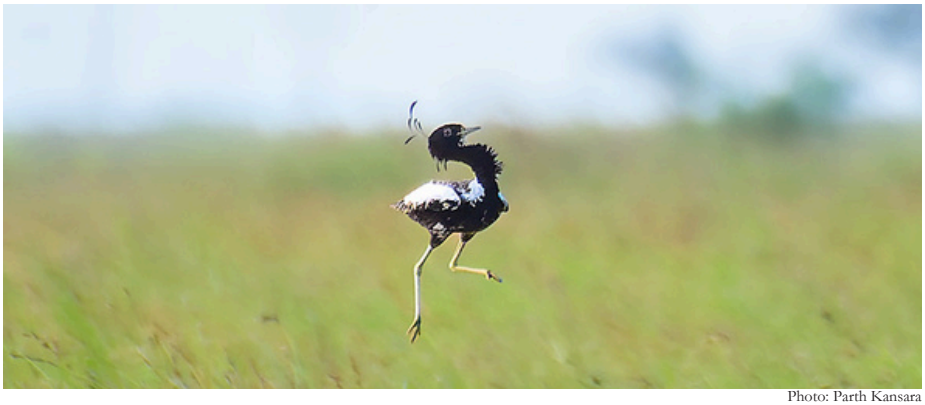


Photo: Parth Kansara

Taxonomy Class Aves; Order Otidiformes; Family Otididae.
Geographic Range Endemic to India and rarely seen in Nepal. In India, it is patchily distributed in the Gujarat, Rajasthan (southeast), Maharashtra (northwest), Madhya Pradesh, Telangana State, and Andhra Pradesh.
Distribution Rare; found in Rangareddy and Sangareddy districts.
Population Nothing is known about the population status or trends.
Habitat & Ecology Inhabits dry grasslands with scattered bushes and dry scrub.
Major Threats Threatened due to changes in land use pattern leading to conversion of grasslands, and hunting.
Use & Trade This species is not in trade.
Conservation Measures No known species specific conservation measures are in place for this species. It is included under Appendix II of CITES.

Remarks
This taxon is found in dry grasslands with scattered bushes and dry scrub. It is known only from two localities. It is threatened due to changes in land use patterns leading to conversion of grasslands, and hunting. 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 Endangered, with the criteria B1ab(iii)+2ab (iii).

Distribution in Telangana State



Pioneers in Conservation

Padma Shri Kollakkayil Devaki Amma



Photo: Giriraj Singh

At a time when conversations around conservation often focus on protecting existing forests, Kollakkayil Devaki Amma, fondly known as *Vanamuthassi* (Forest Grandma), chose to create one herself. A native of Muthukulam in Alappuzha district, Kerala, Devaki Amma has spent over four decades transforming the sandy, largely barren land surrounding her home into a thriving five-acre forest known as Kollakal Thapovanam. Her remarkable contribution to afforestation and biodiversity conservation earned her the Padma Shri in 2026, recognising her as one of India's grassroots conservation pioneers. At over 90 years of age, she stands as an inspiring example of how individual commitment, traditional knowledge and sustained effort can bring about meaningful ecological change.

Devaki Amma's journey into conservation began following a serious road accident in 1980 that injured her leg and restricted her ability to continue farming. During her recovery, she began planting saplings on a patch of sandy land near her home that had previously been used for agricultural activities. What started as a personal undertaking gradually grew into a lifelong commitment. Today, Kollakal Thapovanam supports more than 3,000 trees and plants, including indigenous, medicinal, rare and endangered species. It has developed into an important repository for the conservation of Kerala's native flora, while also providing habitat for birds, butterflies and other small wildlife. The Padma Shri is one among several recognitions of her contribution to the environment. She received the Nari Shakti Puraskar in 2018 and the Indira Priyadarshini Vrikshamitra Award in 2003, along with several state-level environmental honours.

Environment Education

What are Fungi?

Fungi are among some of the most enigmatic yet often overlooked organisms. Although commonly mistaken for plants, they belong to an entirely separate kingdom of life and are, surprisingly, more closely related to animals than to plants. Unlike plants, fungi cannot produce their own food through photosynthesis; instead, they absorb nutrients from their surroundings. Most fungi grow as elaborate vast networks of fine, thread-like structures called hyphae, collectively known as mycelium. They also form remarkable partnerships with plant roots, called mycorrhizae, helping plants absorb water and nutrients in exchange for sugars. Some fungi even partner with algae or cyanobacteria to form lichens, which can survive on bare rocks and contribute to soil formation. With an evolutionary history extending over a billion years, fungi have shaped terrestrial ecosystems in critical ways. Yet, much of their diversity remains undocumented, and they continue to receive far less attention in conservation efforts than plants and animals. If you ever spot a mushroom after the rains, remember that it is only a small, visible part of a vast and often hidden network of living organisms that help keep our ecosystems functioning.



Photo: Derek Harper

Nature for Kids

The Canids of India

Photo: Tisha Mukherjee





Photo: David V Raju

Did you know that India is home to a fascinating family of wild dogs, wolves, jackals and foxes? These animals belong to the family Canidae, commonly known as the dog family. India is home to seven recognised wild canid species: the Indian wolf, Tibetan wolf, Golden jackal, Dhole, Indian fox, Red fox and Tibetan fox. From the cold Himalayan mountains and dry deserts to grasslands, scrublands and deciduous forests, these animals occupy a remarkable variety of habitats.

Each member of this family has its own fascinating way of life. The dhole, also called the Asiatic wild dog, lives and hunts in packs, working together to chase down prey. The Indian wolf is adapted to open grasslands and scrublands, where its long legs help it travel across vast landscapes. The golden jackal is an excellent opportunist, feeding on small animals, insects, fruits and even leftover food near human settlements. Meanwhile, the Indian fox, with its large ears and bushy, black-tipped tail, is well suited to life in dry grasslands and scrublands. The red fox and Tibetan fox are found in colder regions, with the latter recognised by its distinctive square-shaped face!

Wild canids play important roles in keeping nature balanced. As predators, they help regulate prey populations, while jackals and foxes also act as scavengers, helping clean up the environment. Unfortunately, many face threats such as habitat loss, roads and other infrastructure, declining prey populations, poisoning and conflict with people. Dholes are classified as Endangered, while Indian wolves face serious conservation concerns, particularly due to the loss and degradation of grasslands. Protecting these animals also means protecting the grasslands, forests and scrublands they call home.

Here's something to remember: not all important wildlife lives in forests! Grasslands, scrublands and open landscapes are also homes to fascinating animals that deserve our attention and protection.

Our Biodiversity

Otters of Telangana State

Photo: Rk20july, Wikimedia Commons



Otters are semi-aquatic, fish-eating mammals belonging to the weasel family, Mustelidae, and the subfamily Lutrinae. Of the 13 otter species found worldwide, three occur in India: the smooth-coated otter (*Lutrogale perspicillata*), Asian small-clawed otter (*Aonyx cinereus*) and Eurasian otter (*Lutra lutra*). The smooth-coated otter is the species documented in Telangana, where sightings have been reported from Mancherial, Adilabad, Suryapet and Kothagudem, among other areas. Their presence in Telangana's rivers, reservoirs and irrigation tanks highlights the importance of these often-overlooked freshwater habitats.

As predators, otters play an important role in freshwater food webs, feeding mainly on fish and also consuming crustaceans, frogs and other aquatic animals. They are considered useful indicators of freshwater ecosystem health because their survival depends on access to suitable aquatic habitats, adequate prey and places to rest and raise their young. Recent sightings in Telangana, including a family of nine smooth-coated otters in an irrigation tank near Mancherial in 2025 and reports from Adilabad and Kothagudem in 2026, have drawn attention to the state's freshwater biodiversity. However, sightings alone do not establish population recovery or prove that a water body is healthy, systematic surveys are needed to understand their distribution, population size and habitat requirements.

Smooth-coated otters are classified as Vulnerable on the IUCN Red List and face mounting pressures across their range. Wetland loss, river modification, water pollution, declining fish populations, habitat fragmentation and accidental capture in fishing nets threaten their survival. In Telangana, conflict with fishing communities is a particular concern, as otters may be perceived as competitors for fish, leading to hostility and, in some cases, deliberate harm. Protecting them requires conserving connected rivers and wetlands, maintaining vegetated riverbanks, reducing pollution and working with local communities to encourage coexistence. Their future depends not only on protecting individual animals, but also on safeguarding the freshwater ecosystems that support wildlife and human livelihoods alike.

Feature - Flora

Ghost Tree - *Sterculia urens* (Roxb.)



Classification

Kingdom: Plantae
Division: Streptophyta
Class: Equisetopsida
Order: Malvales
Family: Malvaceae
Genus: *Sterculia*
Species: *urens*
Authority: (Roxb.)

Sterculia urens, is a deciduous tree found in dry tropical forests of India. It is recognised by its pale, smooth bark, which gives the tree a ghost-like appearance. The leaves are simple and usually have three to five palm-like lobes. Small greenish-yellow flowers occur in clusters, often when the tree is leafless. The species can grow on rocky slopes and other dry, exposed habitats. The tree is also an important source of gum karaya, a commercially valuable plant gum obtained from its bark. It is also an important source of gum karaya, a plant gum obtained from its bark and used commercially. Sterculia urens is native to the Indian subcontinent and occurs widely across India, including Telangana. Its ability to grow in dry habitats makes it a characteristic tree of several peninsular Indian forests. It is known as బొడ్డు చెట్టు (Boddu chettu) in Telugu.

Photo: Paulmathi Vinod

Feature - Fauna

Kaiser-I-Hind - *Teinopalpus imperialis* (Hope, 1843)



Classification

Kingdom: Animalia
Phylum: Arthropoda
Class: Insecta
Order: Lepidoptera
Family: Papilionoidae
Genus: *Teinopalpus*
Species: *imperialis*
Authority: (Hope, 1843)

The Kaiser-i-Hind, meaning "Emperor of India", is a rare swallowtail butterfly associated with well-wooded landscapes of the Eastern Himalayas. In India, it occurs in well-wooded areas of West Bengal, Sikkim, Assam, Meghalaya and Manipur, mainly between about 1,800 and 3,000 meters. Its wings show an iridescent green color with yellow markings. Adults are strong fliers and are often seen near forest clearings and along ridges. The species is listed as Near Threatened on the IUCN Red List and is protected under Schedule I of the Wild Life (Protection) Amendment Act, 2022. Serving as the State butterfly of Arunachal Pradesh, Habitat degradation, including forest disturbance, is a concern for its conservation. Its known host plant includes *Magnolia campbellii*, linking its survival closely with Himalayan forest habitats.

Photo: Cheongweei Gan

Events

Perspectives' First Nature Journaling Session



Photo: CBCS, OU

On 26th September 2026, CBCS organized its first Nature Journaling session as part of Perspectives. The session was a time of observation and immersion in nature, where participants were invited to lean away from check-listing species and instead connect themselves with the natural world, becoming more receptive and appreciative in the process. The session was led by Ananditha Pascal, who introduced participants to the process of nature journaling and provided some inviting prompts to slow down, notice, and observe. With the enthusiastic involvement of the participants and a time of sharing thoughts at the end of the session, Perspectives' first Nature Journaling event was successful.

News

Two New Gecko Species Discovered in Telangana



Photo: Telangana Today

Telangana's reptile diversity has gained two new additions with the discovery of Hemidactylus cairnicola in a rocky landscape near Vardhamani Gudem in Nalgonda district and Hemidactylus koyaorum from Pakhal Wildlife Sanctuary, Warangal district. The findings highlight the ecological significance of the state's rocky landscapes and forest habitats. While H. cairnicola is associated with traditional stone cairns, H. koyaorum is named in honour of the Koya indigenous community. These discoveries highlight the significance of the dry arid regions of the Deccan as cradles of lizard diversity in Peninsular India, much of which remains to be yet discovered. It also underscores the need for continued targeted research to strengthen our understanding of Telangana's rich but still incompletely documented wildlife.

Signing Off

Who Pays for the Costs of Climate Change?

The devastating floods in Nepal remind us that the consequences of climate change do not fall equally on all world regions. Countries that have relatively low contributions to global greenhouse gas emissions and those that are economically weaker often bear a disproportionate share of the damage, losing lives, homes, livelihoods, and critical infrastructure. Such regions are also those with species rich and highly diverse ecosystems. Meanwhile, many wealthier, industrialized nations have benefited albeit only economically from decades of emissions-driven economic growth. This raises an important question of climate justice: is it fair for countries that contributed least to the crisis to bear its heaviest costs? The demand for climate compensation is not simply a call for financial aid, but is a call for accountability and equity. Climate change is a global crisis, but responsibility for it is not equally shared. Can we call climate action just if those least responsible for the crisis are left to pay the highest price?



Photo: The Hindu - Prabin Ranabhat

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

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