

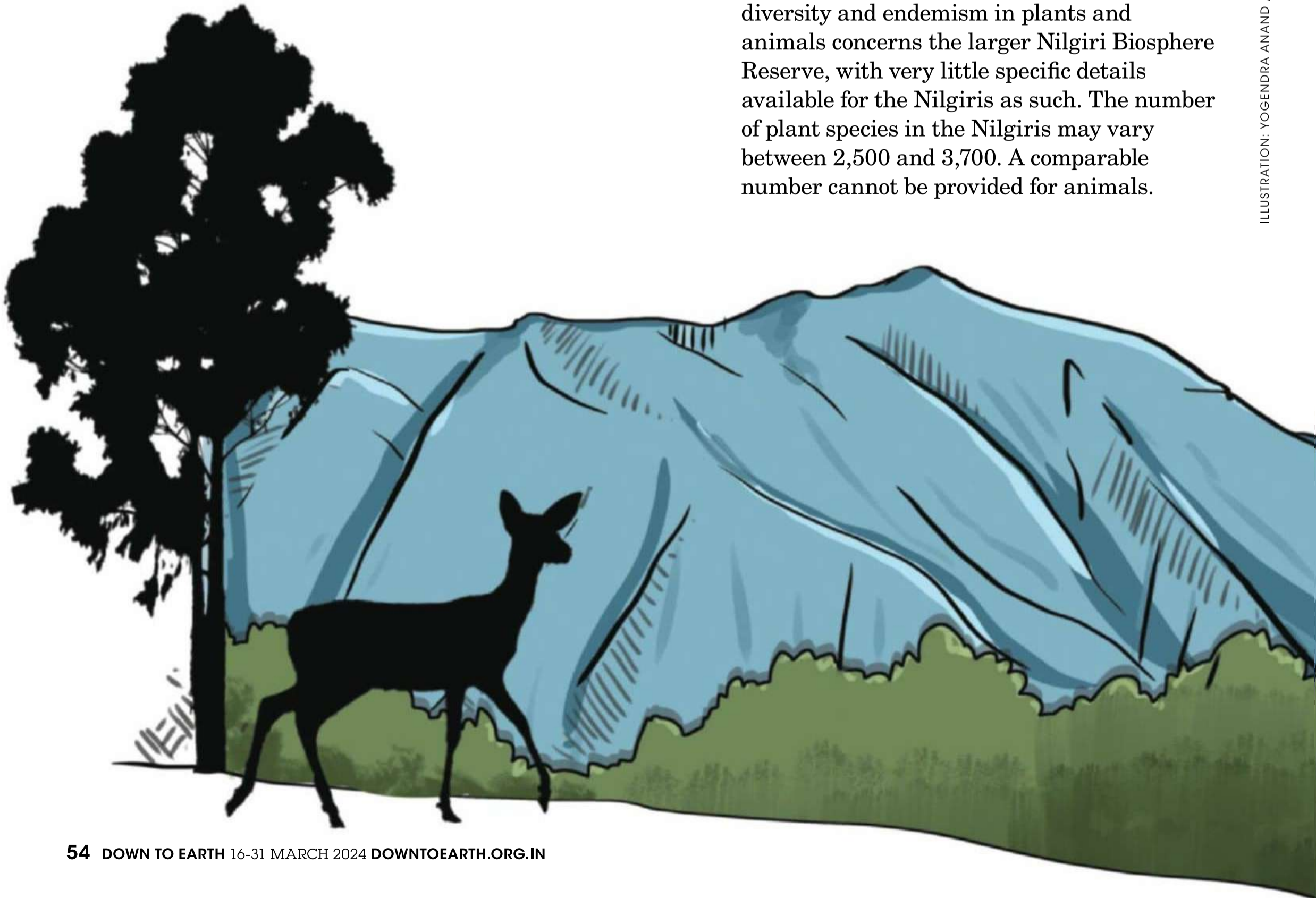
# Walk in the hills

Two centuries ago, British officer John Sullivan created India's first hill station, Ootacamund or Ooty, in the Nilgiri hills. This region is now a well-researched landscape, with its unique flora and fauna, communities and traditional practices featuring extensively in literature. Yet, there is more to explore, shows *The Nilgiri Hills*, edited by anthropologist Paul Hockings. Its various chapters do not just discuss the culture and biodiversity of the Nilgiris, but also how it has changed with colonisation and environmental shifts. Excerpts:

**T**HE GEOCLIMATIC variability is the primary reason for the diversification of vegetation types in the Nilgiris.

While there are mosaics of scrub and tree savannah in the lower and drier areas, the vegetation changes to denser dry deciduous forests, moist deciduous forests, and wet evergreen forests along the elevation and rainfall gradients. At elevations above 1,500 m ASL [above sea level], one finds the unique complex of sholas and grasslands. This vegetation type, which is characteristic of the higher elevation hills in the Western Ghats, is best developed and preserved in the Nilgiris.

Diversity of vegetation has underlain the richness of plants and animals in the landscape. Exactly how many species of plants and animals are found in the Nilgiris can at best remain a matter of guesswork. Much of the existing knowledge on the diversity and endemism in plants and animals concerns the larger Nilgiri Biosphere Reserve, with very little specific details available for the Nilgiris as such. The number of plant species in the Nilgiris may vary between 2,500 and 3,700. A comparable number cannot be provided for animals.



However, a study of the birds of the Mudumalai Tiger Reserve by the Salim Ali Centre for Ornithology and Natural History listed 266 species. Yet another study by the Bombay Natural History Society of the birds of the Nilgiri Plateau suggests the presence there of 192 species. Consolidation of the results of the two studies has provided a comprehensive list of nearly 350 species of birds for the Nilgiris District.

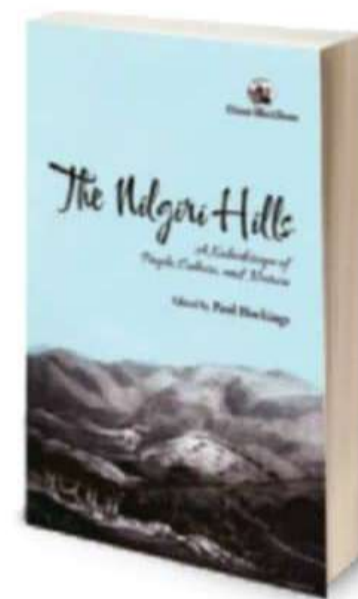
Precise details of other groups of animals are not available. However, one can scale up the figures based on certain benchmark numbers available for the Mudumalai Tiger Reserve. That 321km<sup>2</sup> Reserve is home to fifty-five species of mammals, fifty-eight species of fish, twenty-one species of amphibians, and thirty-four species of reptiles.

Despite the lacunae in the knowledge of biodiversity for the landscape, it is important to realise that the Nilgiris is biologically the most well-explored area in the Western Ghats. This

claim can be substantiated by the fact that several species of animals endemic to the Western Ghats have been named in English using the title Nilgiri. Thus we have among birds the Nilgiri Wood Pigeon, Nilgiri Laughing Thrush, Nilgiri Thrush, Nilgiri Flycatcher, Nilgiri Flowerpecker, Nilgiri Shortwing, and Nilgiri Pipit. Among mammals, there are the Nilgiri Tahr, Nilgiri Langur, and Nilgiri Marten. Further, among the lower vertebrates, we have the Nilgiri Cricket Frog (amphibian), Nilgiri Salea (reptile), and Nilgiri Danio (fish). More importantly, the first Biosphere Reserve in India has been named after the Nilgiris: the Nilgiri Biosphere Reserve was established in 1986 to conserve the biodiversity and cultural diversity of the extended landscape.

The rich biodiversity of the landscape is of relevance not only to the Western Ghats, but also to the nation as a whole. As a result, we currently have two important protected areas of the landscape, the Mudumalai Tiger Reserve and the Mukurti National Park. They are not only representative of the landscape's heterogeneity and biodiversity, but are also home to a handful of endemic and endangered animals. The Mudumalai Tiger Reserve is home to around sixty tigers and some 800 elephants. It is also one of the last habitats in the state for the critically endangered White-rumped Vulture and the Indian Vulture.

The Mukurti National Park is representative of the high-elevation ecosystem complexes in the Western Ghats, and is one of the mainstays of the endemic and endangered Nilgiri Tahr. A 2004 census reported between 200 and 250 Tahr in this National Park.



### **The Nilgiri Hills: A Kaleidoscope of People, Culture, and Nature**

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Besides, the protected area is home to endemic plants and other endemic animals, including birds, amphibians, and reptiles.

The need to conserve the rich biodiversity of the Nilgiris was first felt in the early 1870s. It was at this time that unregulated hunting of wildlife had led to a drastic reduction in the population of many species; and this was particularly true for the Nilgiri Tahr, which had reached the brink of extinction in the Nilgiris 150 years ago. To address the issue of wildlife conservation, the erstwhile Nilgiri Game Association was established in 1877. Soon after this, in 1879, the Nilgiri Game and Fish Preservation Act was passed by the then Madras government. Despite these early interventions, conservation challenges in the Nilgiris have only been on the increase.

Once the British established colonies in the landscape, vast areas of forest were cleared to accommodate commercial agriculture and plantations, especially tea. The British



considered the grasslands as 'wastelands' and tried to 'improve' the productivity of these sensitive habitats by planting exotic trees. Eucalyptus and another Australian species, Wattle, were introduced into the grasslands in the 1840s, and by 1860, Cinchona was being cultivated locally too. Over the years, Pine and other non-native tree species were introduced into the landscape, upsetting the fragile ecological balance of the shola–grassland ecosystem.

The introduction of non-native plants did not stop with trees. Tea and coffee were introduced in the 1830s. Many other species of garden plants were brought in from Europe by the colonisers and planted. Most of these species naturalised in the landscape, thanks to the local climate. Some of the species have become invasive—for example, broom. Botanists estimate that there may be between 200 and 300 such exotic plant species in the Nilgiri landscape today.

Of all the introduced plants, the Wattle and Lantana have become devastating and have led to large-scale degradation of the natural hill ecosystem. While Lantana has emerged as a major cause for habitat degradation and fire in the drier habitats, Wattle has usurped extensive grasslands and has even invaded shola forests locally. Controlling the spread of these two species has cost the government huge sums of money annually for years now.

Centuries before the British set foot on the Nilgiris, there were tribes who had migrated into the landscape. It is generally

accepted that the earliest of these immigrants were the Todas and the Kurumbas. Todas brought with them the water buffalo. Due to their religious beliefs, some individual buffalo were set free in the wild and they have since contributed to the now significant population of feral buffaloes in the Nilgiris. These feral buffaloes look almost like the Wild Buffaloes of Southeast Asia. While some ecologists consider the feral buffalo invasive, the actual impact of the species on the local ecosystem

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needs to be studied in detail.

Loss of grasslands has endangered a local bird, the Nilgiri Pipit. The Nilgiri Tahr, which is totally dependent on this habitat, is also endangered. Although their population recovered well from the bottleneck in the 1870s, the numbers are still fluctuating. The government has launched several programmes to restore the grasslands. Restoration of grasslands in the Nilgiris remains, however, one of the biggest conservation challenges of the twenty-first century.

In an attempt to address the conservation challenges in the District, the government established the two protected areas in Mudumalai and Mukurti, as mentioned. On a broader scale,

the entire Nilgiri landscape has been brought into the fold of the Nilgiri Biosphere Reserve, with the two protected areas as a part of the 'Core Zone'. The Biosphere Reserve concept was first conceived and brought into practice by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in the 1970s under the banner of a 'Man Biosphere Programme'. It is a global programme wherein conservation, research, and people's livelihoods are

simultaneously addressed in vast natural areas. There are currently eighteen Biosphere Reserves in India, of which the Nilgiri Biosphere Reserve was the first to be declared, and also the first one in India to be included in UNESCO's global list of Biosphere Reserves.

As many as ten hydroelectric projects are functioning in the Nilgiris. The dams have not only destroyed extensive forests and grasslands, but have also changed the character of the many streams and rivers that flow across the landscape. Dams and the associated infrastructure for conveying water to the power-generating units have led to the fragmentation of habitats, hindering the movement of wildlife like elephants and other large mammals. Dams have become a permanent blot on the Nilgiri landscape. **DTE**

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*(Excerpted from The Nilgiri Hills: A Kaleidoscope of People, Culture, and Nature edited by Paul Hockings, with permission from Orient BlackSwan)*

