

**TIMES  
EVOKE**

THE WOODS WERE LOVELY,  
DARK AND DEEP...

In days of frenzied war and fragile peace, when self-important men decide the fate of millions of beings, it might seem out of the way to talk of forests — but it isn't. So many of us, wrapped in smugness and slyness, cruelty and dryness, have forgotten how minuscule we humans are, compared to the nature we so unthinkingly destroy. Forests first appeared on Earth 390 million years ago. The earliest fossils, dating to the Devonian period, show trees with wispy trunks and non-woody tissue, resembling thin palms instead of grand banyans or oaks. There were no birds or animals — only millipede-like insects moved around, while the trees waited another 150 million years for the first dinosaurs to arrive.

Importantly, the birth of forests brought the revolution of life — earlier, carbon dioxide (CO2) levels on Earth were too high for plant life to develop into more than ferns. In the Devonian period, however, CO2 levels began to drop and plants developed stronger roots and arching branches. Megaphyll leaves emerged, fitting in more pores or stomata to absorb CO2 — and produce oxygen. As trees — scaling to forests — breathed out oxygen, conditions for life on Earth strengthened. Eventually, six million years ago, the first humans came along. Forests were humanity's first home — even after we left their leafy environs, we returned constantly for water, wood, medicine and energy. After all, from the Carboniferous period, 300 million years ago, a critical mass of trees had perished, lying in layers, forming peat. Under sand and mud, pressure and heat, water and gases were squeezed out from this, leading to the formation of coal. Once humans discovered power here, the world was transformed. Ironically, that transformation threatened the very source of this power — forests. Over the last 10,000 years, the world lost one-third of its forest cover — since 1990, Earth has been denuded of 10% forest coverage, over 400 million hectares, as human need — and greed — have only grown.

Forests have been cut down for essential farming — and for growing, mining and drilling all manner of trivialities, ancient trees ripped up for the thrills of scented candles, paper napkins and phone covers. Imagine the travesty of destroying a forest, millions of years old, holding the secret to life on Earth, for an artificial sweetener. Yet, this mindlessness now veils our understanding of nature — which we must correct. Hence, dear reader, TE's global experts highlight the majesty and mysteries of forests, suggesting we observe our remaining woods with some awe. Forests, once dark and deep, are the very reason we arose from interstellar sleep — let's keep them standing.

# 'Russia, although awed by its forests, tried to dominate these, with surprising results'

**Sophie Pinkham** is Professor of the Practice, Comparative Literature, Cornell University. Speaking with **Srijana Mitra Das** at *Times Evoke*, she discusses the rich forest life of Russia — and why it inspires humility:

**What is the core of your research?**

My book, 'The Oak and the Larch: A Forest History of Russia and its Empires', tells the story of the Russian Empire, the Soviet Union, the Russian Federation and the different places conquered by Russia over the centuries. I describe this from the perspective of the forest and environment, beginning with the Neolithic period, going forward to the forest in the current invasion of Ukraine by Russia.



**How are forests perceived in Russia?**

Once Slavic power moved from Kyiv after the Mongol invasion to central Russia, its heartland was in a densely forested area. So, the forest was at the heart of Russian culture from its beginning. For early Russians, the forest was essential for timber, firewood, energy, building materials, food and pelts that helped Russia become an economic power. But the forest was also a source of threat — there was this dichotomy of need with great danger.

That tension — affection and fear — continued into the techno-utopianism of the Soviet period, when leaders fantasised about making nature subservient to human wishes. There was fear, even hate, of forests, rivers and other natural features that weren't serving human purposes. There was aggressive rhetoric in the Soviet period about declaring war on 'useless forests'. Russian ambivalence to the forest tells us about broader human relationships to the natural environment. We see this in contemporary Russia.



**LEAFING THROUGH TIME:** Russia is the only country on Earth to have both subtropical forests and Arctic tundra — its forests have played an enormous role in its economic power, cosmologies, politics and artistic world, encompassing Tolstoy to Stalin

There is rhetorical celebration of the forest, countryside and traditional architecture. For Russian nationalists, the forest is a location of true Russian identity. There's a strong strain of 'ecotionalism'. Meanwhile, there is considerable mistreatment of Russia's forests — almost one-fifth of the world's forest cover, playing a very important ecological role for the planet. Alongside illegal logging, there have been reports of plans to clear-cut the forests around Lake Baikal, a huge freshwater lake, to build ski lodges. It's a classic story of commercial greed at the expense of an irreplaceable natural treasure.

become a symbol of survival. I write about gulag prisoners often put near the taiga to cut wood — the forest literally kept them alive. People facing lethal malnutrition found vitamin-laden berries in the forest. On a metaphorical level, the larch and dwarf pine became symbols of resilience.

**Can you tell us about climate change in Russia today?**

Climate change is a serious threat to many of Russia's landscapes and ecological balance. It's affecting water supply, making permafrost melt and forests drier — the fires seen in Russia over the last 10 years have been unprecedented in recorded history.

**So, is there a Russian environmental politics?**

Given the political situation since 2022, many environmental activists have had to leave. It's dangerous to oppose the government and there's been a great decline in ecological activism, as with other kinds of resistance. But there are many ordinary Russians who treasure nature and who, in the case of plans to clear-cut the shores of Lake Baikal, for instance, fought back, saying, 'This is part of our national heritage and we must protect it.' So, this is not without hope. Also, because smaller-scale provincial ecological activism is not necessarily linked to western NGOs or broader geopolitical agendas, there is more room for people to protest that in Russia than, for example, to oppose the war in Ukraine.

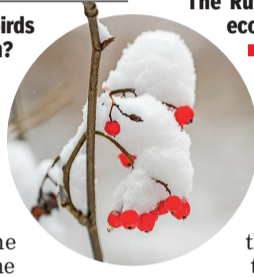
**You say 'Russia has more trees than there are stars in the galaxy' — please elaborate?**

I wanted to highlight the unbelievable vastness of Russia's territory, both in scale and variety. Russia is the only country that encompasses both Arctic tundra and subtropical forests — there is great variety even within that. The title of my book, 'The Oak and the Larch', gestures towards a principal duality of Russian forests. The oak is a deciduous tree, symbolising righteousness and strength, worshipped in early Slavic society. It's the most iconic tree of the beautiful deciduous forests of European Russia, immortalised by Tolstoy and Turgenev.

Meanwhile, the 'larch' is a symbol of Siberia, the taiga or boreal — that's a much harsher ecosystem. It's very cold, swampy and vast. It's commonly understood that if you get lost in the taiga, you can easily perish — but the larch has

**What role do animals and birds play in Russian imagination?**

An important aspect in Russian nature writing is how central hunting was — there's this tension here between admiring the beauty of the natural landscape and killing animals like the pheasant, grouse, etc. The taiga has an entirely different set of animals, including the Siberian tiger and bears. I have written about a Russian ecologist who devoted his life to rescuing orphaned bears, whose mothers were killed by hunters, trying to get them back to the wild. Bears are emblematic of the forest — that's why the Russian national identity is often described as 'the Russian bear', linked to notions of power and danger.



**BERRY INTERESTING:** Humans and bears need forest wealth

**The Russian state tried dominating ecology — did nature ever beat it?**

Absolutely. There was this tremendous hubris in Russia that they could 'tame' nature — with very unsatisfactory results. Imperial Russia tried importing cutting-edge German forestry methods but found it impossible to use these in vast Russia — even today, many areas of the Russian forest remain untouched. In Russian Karelia, you see a striking difference on the Finnish versus Russian side. The Finns have exploited their forests — Russia has much more wilderness. So, some animals managed to survive.

In the imperial period, Tolstoy became a forest advocate, linked to a deforestation crisis when tree-cutting was followed by erosion, drying of lands, etc. Later, there was a Soviet plan to make huge agricultural fields in Central Asia by irrigating the Aral Sea as irrigation — that caused the almost complete drying-up of the Aral Sea, with very shocking images of a sea that just disappeared. I wrote about Stalin's 'Great Plan for the Transformation of Nature' as well — under this bombastic program, Stalin decided he would plant huge forests to protect Russia from what was seen as 'uncivilised Central Asian winds'. However, Stalin found you can't suddenly plant enormous forests where they've never grown before. Such attempts to tame nature for human purposes make a history of unintended consequences — it should teach us respect for nature and its unknowns.



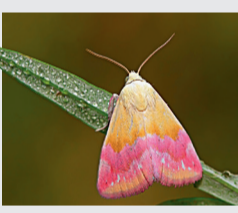
**BEAR ESSENTIAL:** An icon of Russia itself



**WILD THINGS...**

Forests are full — or should be — of astonishing beings with powers we can only dream of. **Spider monkeys**, residents of forest canopies in Central and South America, have prehensile or 'capable-of-grasping' tails which function like a fifth limb — they enable 'brachiation' or swinging, the tail supporting them while they use their hands to reach for fruit and nuts. There are 7 species of spider monkeys — all risk extinction now due to habitat loss and hunting

The lovely rosy maple moth is found in deciduous forests of eastern North America, living on maple trees — at a tiny wingspan of 3 cms, the difference between boys and girls can be spotted from the former's heavier antennae and the latter's slender set. Nocturnal and solitary, the rosy maple moth ranges from pale yellow to bright pink — the bright colours are a bluff of toxicity, aposematism warning off predators, without dropping a single bomb



The Andean Cock of the Rock lives in cloud forests in Peru, nesting on rocky ledges — 13 inches long, it has a startling call but is shy, avoiding humans coveting its wonderful plumage. Males perform an elaborate plumage display in 'leks', large groups where 'confrontations' occur, the birds bowing and snapping their bills to impress. Living 7,000 feet above humans, so far, this wild thing can still freely sing



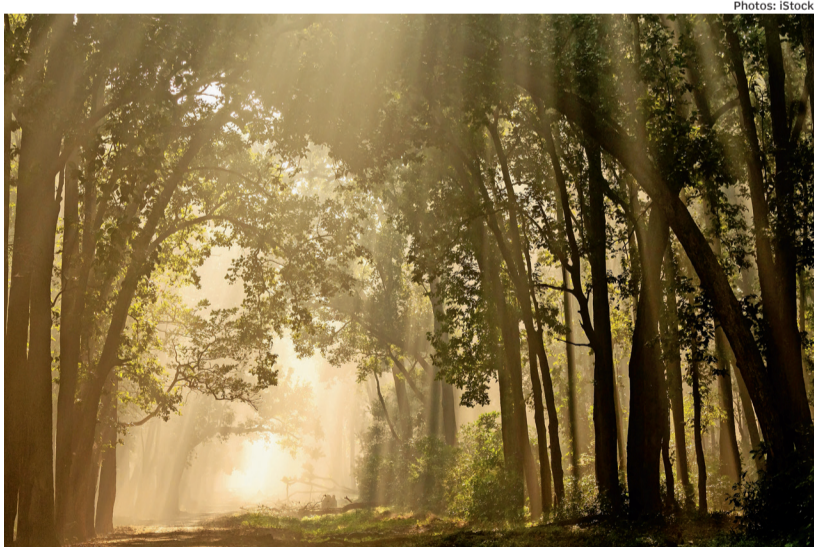
Research: National Geographic, Smithsonian Magazine, BBC Earth, IFAW, Encyclopedia Britannica

# 'From rhinos in Harappa to ancient war elephants, forests and their beings shaped India's historical identity'

**Mahesh Rangarajan** is Professor of History and Environmental Studies at Ashoka University. He speaks with **Srijana Mitra Das** in *TE* about the great Indian forest — and how this and its many beings have survived:

Mahesh Rangarajan recently co-edited 'India's Forests: Revisiting Nature and History' with Arupiyoti Saikia. What do forests mean, TE asks the environmental historian, at a time when many people have not directly experienced one? Rangarajan replies, 'In most countries, forests are much less than they once were but forests mean different things to different people. It depends on the individual, group, time and larger context. Our new book travels from a prehistory of India to the contemporary period — over that time, the meaning of 'the forest' changed considerably.'

At first, there was great closeness between human existence and what is now considered 'the wild'. Rangarajan says, 'In prehistory, there was intensive contact between humans, forests and



**ROOTS & BRANCHES:** From a place of beauty and magic to a rich resource for animals, herbs, shrubs and trees, the forest has played a central role in the imagination of India

pan seals in 2500 BC. The lion was very widespread in its forest range until the 19th century, spread from far south to the east. Now, lions are mostly found in Gujarat while the rhino exists only in Assam and Bengal. The forest homes of these animals have shrunk while the habitations of humans have expanded.'

Rangarajan adds, 'However, it's not like the forest has ended. There are still liminal spaces shared between flora, fauna and humans. There are regions in India where the forest remains part of human experience and sensibility, continuing to play a very important ecological and economic role, often most directly experienced by the poor.'

Are there different kinds of Indian forests? Rangarajan explains, 'There are diverse understandings. The Forest Act of 1878, for instance, officially defined government-owned forest land as 'forest'. This government category also has distinctions, such as places the government has full property rights or reserved forests, unclassified forests and civil or revenue lands handed over for cultivation

versus protected forests where some rights are defined and some aren't. There are also botanical descriptions. Rangarajan says, 'The 1968 book 'A Revised Survey of the Forest Types of India', by Sir

Harry Champion and Shiam Kishore Seth, offered some interesting categories, such as 'dry deciduous forests' and 'moist deciduous forests'. There are also 'wet evergreen forests', now called 'rainforests', in places where it rains 200 centimetres a year, like the Western Ghats and parts of the Northeast.'

However, Rangarajan mentions, 'This categorisation looks at forests only in terms of trees though. Both authors were foresters and forestry then was largely about timber and wood. So, many areas they classified as 'wastelands' would now actually be called 'thorn forests' — Jayashree Ratnam of the National Centre for Biological Sciences argues they could be called savannah. Hence, we need to be broader in our

classifications, looking perhaps at uncultivated land, grassland to tree-dotted savannah to mature tree forest.'

The forest is also not the impenetrable mass some imagine. Rangarajan says, 'A common urban misapprehension now is that the forest is a tangle, a puzzle of vines and vegetation, primeval or untouched. However, it is crucial to remember humans have been in these areas for a very long time. We used fire — and many of these forests were sculpted by this over millennia. Just as India has about 35,000 types of flowering plants, it has huge diversity in jungles, forest floors and microclimates. There is a saying in Rajasthan about the difference between Marwar and Mewar being babul in the first area to amla in the second — you'd know the boundary of the two microclimates upon crossing from woods of babul into amla. The forest here is mapped both by folk and state memory.'

Foresters in India classified thickets largely by looking at the rich troves of trees — timber, teak, sal, sheesham, pine, deodar, etc. — found in distinct regions. Rangarajan points out, 'Today, notions of the forest include more — flora, herbs, shrubs and grasses also compose these.

Think of the wild buffalo, ancestor of our domestic buffalos, and rhino, both grass-eaters. The blackbuck or 'krishna mrigha' also eats grass in forests. Each of these animals has a relationship with human life, in ceremonial, religious, livelihood or regal ways. So, the forest and its many elements form part of Indian daily life.'

Was there a rupture when colonialism arrived? Rangarajan considers, 'There was certainly a colonial phase which looms large over us. The Forest Department itself was created in 1864. Many of our forest laws derecognised property rights. The zamindari abolition debate was a big question into the 1950s, around the

**STILL POWERING MANY:** As fossil fuels are fickle, forests give some energy



**GRASS-EATERS:** Blackbucks on savannahs

large animals. Think of the rock art of Bhimbetka, the Paleolithic and Mesolithic Vindhyan cave paintings in Madhya Pradesh. These show a tiger in close proximity to human beings. You could not separate the habitations of large forest animals from humans situated on the edges of thickets. Imagine how 'the forest' changed for these animals, particularly in the Indian subcontinent where the density of humans to land area rose dramatically. A paper in our book refers to lions and 'unicorns' in India, meaning the rhinoceros unicornis which even showed up on Harap-



**HARAPPA TO HERE...** Rhino forests shrank

and far more. It is a place of imagination and discovery for many. There are regions where the sense of a forest is critical to a sense of self. The Chipko Andolan of 1973, just some decades ago, showed how important forests were to hill people. One aspect of being Uttarakhandi was the power of the village to decide what happened to forests. A sense of community stemming from forests still exists. For many, the forest remains part of a historically evolved identity. TE hopes that rootedness, binding people and animals, from lush grasses to swaying canopies, will always prevail.

**READERS WRITE**

Dear Times Evoke,

I am sending you my immense gratitude for the mesmerisingly beautiful feature on oceanic mapping (15th March) with Sara Caputo! Maps are such fabulous resources — they extend our imagination and open doors to traverse the world. The next time maps are referred to, a lot of thought in my mind will come into play about their creation, evolution and numerous iterations.

—Parul Bhandari, Noida

Apropos TE's in-depth column with Sara Caputo, it is true that knowledge often fosters arrogance as its flipside. Since over 70% of Earth is oceanic, mapping the seas was inevitable. However, using this knowledge for judiciously tapping marine natural resources, with deep concern for the environment, has become critical now. Thank you, TE, for bringing us such thought-provoking articles every week.

—Amit Tiwari, Amethi

TE's insightful interview with Susan Jebb (4th April) offered valuable advice for people gaining weight — don't let obesity defeat you. The key lies in the right food, proper portions and exercise. Controlling obesity is tougher than quitting smoking but the crucial step is motivation. Let's decide to become a healthier nation!

—Col. Gopal Verma, Delhi

TE's article titled 'Humans are fatter than ever before' with Susan Jebb was exciting. It explained how our evolution is now causing overeating, driving many ailments. While GLP-1 drugs can help, healthier diets, local foods and exercise remain central. Looking at menus these days, I fervently hope as more people highlight food value, restaurants will focus on real nutrition and not just pander to our taste buds.

—Malashri Sen, Kolkata

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