

TIMES  
EVOKE

REMEMBER THE TIME...

As we head into summer's golden holidays, we often gravitate to nature. This could mean visiting mountains or beaches but the search is the same — to find natural beauty, enjoy new impressions and recreate earlier tranquillities. Nature with its elements, from the feel of grass to the fragrance of rain, the sensation of a cool breeze suddenly caressing your skin to the sound of leaves rustling in enigmatic trees, holds the power to evoke our deepest memories. Many are linked to simpler times, when we experienced small joys unquestioningly. Some go further back — our environmental experiences touch our intrinsic being, highlighting the incredible fact of us sharing the only planet which sustains life.

There are further ways nature's love for us shows in the times we spend together. Psychologists at the University of Chicago find a 50-minute walk in nature boosts our memory by 20%. In Denmark, a survey of 9,00,000 people found those lacking access to natural surroundings faced a 55% higher chance of developing mental illnesses. The World Economic Forum finds urban denizens — that's seven out of ten people globally by 2050 — confront a 56% greater chance of mood disorders while those in natural surroundings enjoy a 12.4% decrease in stress-producing cortisol. Experts currently posit nature's ecosystem services — its creation of crops, its purification of water and air, etc. — amounts to \$140 trillion per annum. But this does not estimate the value of getting caught in a delicious burst of rain or watching a fragile dawn gain in golden strength, like a dream itself coming true.

This makes the Anthropocene, where our actions are damaging Earth indelibly, so dangerous. Climate change, biodiversity extinction and habitat loss may seem like impersonal terms. But the truth is, with every tree and stream gone, we are cutting away at our own memories, those we've lived lovingly and those we could still build anew — the loss could even mean forsaking understanding why we are here at all. However, as Times Evoke's global experts emphasise, we can still save what gives us continual life. Join Times Evoke in exploring how nature gifts us invaluable memories — and how we can protect nature from becoming simply a remembrance.

# 'Nature influences human thought itself — it has inspired Isaac Newton to Steve Jobs'

Fiona Stafford is professor of English language and literature at Oxford University. Speaking to Srijana Mitra Das at Times Evoke, she discusses the many meanings of nature in human lives:

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

My university subject is English literature but I have recently been working a lot on trees, flowers and landscapes. This grew partly out of my interest in writers like William Wordsworth and Robert Burns but I have become more engaged with natural phenomena especially with the environmental crisis. I study not just literary representations of nature but also the associations, meanings and ways in which people's understandings of the landscape, plants and flowers have changed over the years. All these forms of life have been on the planet for an extremely long time and have incredibly rich meanings. It is very important to study these.



**What role does nature play in our memories?**

In cultures which didn't depend much on the written word, natural features like trees, mountains and rivers were absolutely essential for helping people understand locations. These marked people's collective memory as communities. They also have a strong personal significance in individual memories. People are shaped by the natural phenomena they grew up with — someone who lived by the sea or in the hills or near a park in the city will have multiple memories bound up with those striking features.

**What does this bond with nature tell us about being human?**

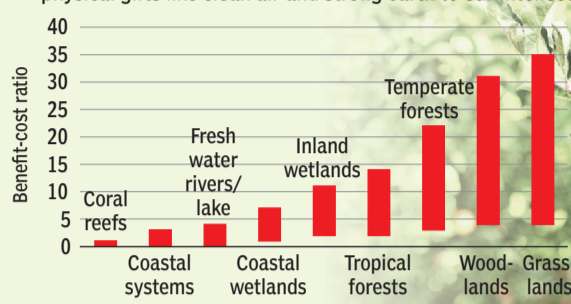
It tells us everything. It reminds us we are not separate from the natural



WITNESSING THE TIMES: Oak trees, which live over 600 years, awe with their antiquity

## INVESTING IN IDEAS

Making investments in nature gives multiple gains, from physical gifts like clean air and strong earth to our intellect



Data Courtesy: FAO, 2022. The State of the World's Forests 2022. Forest pathways for green recovery and building inclusive, resilient and sustainable economies. Rome, FAO

world but a part of it. It connects us with older, more traditional ways of understanding humanity's place in the world. There are further important aspects — one of the dimensions of, say, a tree is that it is full of non-human life forms. Being aware of other beings sharing space with us, living with us on the same planet, is extremely important. It puts our own position in perspective to see other species living their lives beside us but not necessarily taking much notice of us. We often assume the whole world revolves around us human beings but tending to the natural world makes us see that differently.

### TO THINK AHEAD

**You write about how the apple symbolises a great deal of Western culture — can you tell us about this?**

The apple is a foundational symbol in Western culture, not just because it



grows widely but it is in the foundational myths. In the Bible, the Garden of Eden has the Tree of Knowledge which is understood as the apple in art and literature. We also find this in Greek and other Western mythologies. It holds modern relevance too — when someone says 'apple' today, we think of iPhones.

Steve Jobs chose it as the symbol of his innovative company. He, in turn, was influenced by the English scientist Isaac Newton who, in the 17th century, conceptualised the laws of gravity while sitting under an apple tree. He saw a fruit falling down and wondered why the apple fell straight to the ground. The apple thus became a symbol of scientific thought and later grew linked to the Beatles and other cultural icons too. The fruit constantly invokes the meaning of Western culture.

**With climate change and habitat loss altering familiar landscapes now, does a person's understanding of space and time also change?**

The environment is changing very rapidly now — and quite a lot of people are in denial about that. If a certain bird was once common, they tend to believe it still is when in fact, there has been a massive loss of biodiversity. Many people find that almost too difficult to imagine. Those who are in tune with these facts are dismayed — there is a deep sense of loss as familiar species face threats or even go extinct. This is a

great collective tragedy. Those who are concerned often help with conservation efforts — and it's surprising how natural species revive with the right conditions. In Britain, a river which had been straightened has recently been returned to its natural course. There are reports already of a regeneration of life in its waters. It is still possible to reverse this threat if people recognise the problem. There is an old myth in the West about the countryside being an unchanging pastoral idyll you can visit anytime from



HYDE & SEEK: An industrialised West tries to hold nature in areas like Hyde Park

the city — this is a dangerous idea now.

**Along with nature's science, should there be a more formal recognition of the emotional and aesthetic richness it holds?**

Yes, absolutely. I think this is extremely important and one of the reasons I wrote about trees and flowers. I wanted to alert people to this very rich human psychological, cultural, intellectual and aesthetic bond with the natural world.

### ART, NATURALLY

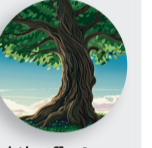
William Shakespeare, the 16th century bard, was deeply influenced by nature which, in its tempests and winter's tales, phoenixes and doves, brought idylls to London's theatres. However, although he wrote of lavender, carnations and thyme, the rose remained his favourite. While he airily posited, 'A rose by any other name would smell as sweet', he also stated firmly, 'Of all flowers, methinks a rose is best'



The 20th century painter Frida Kahlo was a radical artist, rejecting norms, but she retained art's deep connection to nature — she cherished her garden in Mexico, filling it with native plants to emphasise her identity. She included bougainvillea and lantana in her headdresses and painted plants and flowers wittily, including drawing fuchsia climbers as winged insects buzzing around her head

But first came India's great writer Kalidasa, prolific in the 4th century. His love of nature shimmered in his celebrations of the monsoon, deer and fish characters and a cloud as a messenger in 'Meghaduta'.

Interestingly, Kalidasa could even be considered the first environmental advocate for, legend has it, knowledge came to him on his discovery that he was sawing through the same tree he was sitting on



Research: National Gallery.org, BBC, CNN, Smithsonian Magazine, Encyclopaedia Britannica

It may be less easy to measure than science but it is no less important. There is a large body of material recording people's longstanding attachments to the natural world — learning of this also helps us understand how people's minds and hearts work. We take this side of the environment far too much for granted. Along with food for the body, we need nurture for the mind and soul — only nature gives us all of these.

### NAME, PLACE, ANIMAL, THING

Animals and birds often become linked to places and persons in human memory. Consider the Baltimore Oriole, a seven-inch songbird found in the woodlands and riversides of America's Great Plains — its rich whistle heralds spring in the US northeast. This musical bird was named after a military figure though — its burnished orange and brown colours brought to mind the coat of arms of Lord Baltimore in the 17th century



Ponies are often imagined as docile — but the Dartmoor pony has a hidden history. Once hunted for meat, archaeological evidence shows its domestication from the Bronze Age. But a wild streak prevailed and during the Roman invasion of Britain in AD 43, Devon's defiant Dumnonii tribes used Dartmoor ponies to fend off Roman onslaughts. Later, they ferried ore from mines but today, they're left in peace on the moors

The Bengal tiger typifies a landscape full of thrills — in India for over 17,000 years, it weighs 200 kgs and runs at 60 kms per hour. The Bengal tiger can eat 40 kgs in one go, carelessly swishing its 43-inch-long tail thereafter. This iconic animal is said to never forget a face — perhaps the nicest remembrances of it should be from afar, for both the tiger and human beings



## 'Writing of India's natural wonders helps save these'

Writer, artist and naturalist Bulbul Sharma has most recently co-authored 'Between Heaven and Earth: Writing on the Indian Hills'. Speaking to Times Evoke, she discusses words emerging naturally:

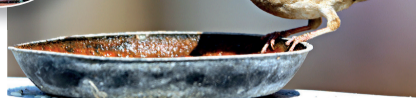
My writing on nature sprang up from my own life. I grew up in Bhalai when it was still a small place. My father was an engineer and we went there when a steel plant was to be built. We lived in a house with a huge compound and a stream running through — there was wilderness all around. One grew up walking unafraid through forests, looking into ponds, planting seeds. The memories of those days stayed deep in my mind — when I began painting, I found I wanted to depict those scenes. Later, I wanted my children to enjoy the same kinds of experiences. But, in the late 1970s, there were no books for Indian children which could tell them about our plants, birds and animals. There were beautiful books from abroad but these described English robins and rambles to meadows with ponies and stiles. I wanted to go bird watching with my children but there was no literature they could tap into. There were amazing treatises by Dr Salim Ali, of course, but these were for adults and quite scientific. So, I wrote and illustrated a book on Indian birds which possibly helped children and adults. My writing expanded, encompassing many features, from mighty hills and deep rivers to the light comedies of a bright butterfly flying flippantly over a very serious person's head.



A HOST OF GOLDEN MANGOES! The luscious fruit symbolises summer and its delicious memories

hand to you through a leaf or a bird call or a fish you can see darting through a waterbody, if you allow yourself to just stand and stare. We come from nature and it knows how to reach out to us. There is wonderful Indian writing on ecology today but once, there were mainly books by British officials posting in India. It's fascinating how many British police officers, often sent to remote places and living lonely lives, would turn to nature and write detailed diaries about Indian birds and trees. We need more writing now on Indian wildflowers and herbal medicinal plants. I am hoping to undertake this because India has a tremendous repository of knowledge about remedial plants — even now, women in villages and some urban communities use medicinal herbs and shrubs expertly. We know of tulsi and aloe vera but there are in fact thousands of such health-giving species. Foraging for salad is a fashion in places like New York now. But in India, we have foraged for valued plants over centuries. We need to preserve that knowledge.

Writing on nature is changing as well. Earlier, this was more joyous and lyrical, focusing on nature's awe-inspiring beauty. Now, when I read both Indian and international writers, their words convey how threatened the natural world is — there is an urgency about conserving what is left. These books emphasise how we can't just appreciate nature, we need to actively save it. Part of that effort begins with loving the natural world. And the more such words we write, the better.



SINGING MY STORIES: The Indian sparrow (above) need literary attention like the English robin (L)

## 'Nature's fragrances shape the meaning of 'home' in our minds'

Elise Vernon Pearlstine is a zoologist and author of 'Scent: A Natural History of Fragrance'. She tells Times Evoke about why nature's range of perfumes holds great significance:

For many of us, certain fragrances evoke a strong memory. We associate a particular flower, for instance, with a joyful time or a visit to a special place in nature, such as a forest, with calm and peace. Our sense of smell has a direct connection with our mind and emotions and certain smells bring back intense personal remembrances. Nature's fragrances also influence our current emotions — lavender helps us relax. While the plant creates its distinctive fragrance to attract pollinators, inhaling this enhances our ability to deal with stress. Some fragrances enliven us — peppermint sharpens our memory and helps us stay alert. That comes from the qualities of its leaf which is a bit rough and furry, the protective fur holding chemicals that energise us.



Some fragrances help us understand our location. Speaking for myself, I associate the smell of rain with



IT'S TIME TO RELAX: Lavender's sweet, gentle fragrance calms restless minds

where I grew up in the western United States. That smell — a shower in the desert, releasing all those chemicals stored in the sands and touching on the bacteria and fungus therein — reminds me deeply of home. The 'mitti attar' made in Kannauj, India, capturing that fragrance of rain soaking dry earth, is similar. Over the years, certain flowers in tropical Florida — jasmine, frangipani, ylang-ylang — really anchor me. We could live by a beach or a park of urban trees but depending on what people are familiar with, their idea of 'home' has a fragrance. India has such wondrous and distinctive smells. Consider the Western Ghats which house pepper,

cardamom and ginger. Pepper, a vine, grows under the very rich tree canopy that flourishes in those tropical wet forests. Peppers start out green in colour and as they are dried, they turn darker — while they are cured, a shell develops around them which holds that pungent combination of chemicals which gives them a sharp smell. Cardamom and ginger, each with their unmistakable fragrances, also grow on the ground under these trees. Ginger, a root, has a beautiful fresh smell and many medicinal properties, including treating sea sickness — that's why, from very early on, sailors journeying the world would carry ginger with them. This boosted the cultivation of ginger and explains its prevalence in dishes cooked worldwide.

Throughout history, nature's fragrances, our emotions and making medicines for our physical form were very closely tied together in the human mind. If people felt a smell was pleasant, it was always adopted for good purposes. People grew fragrant plants in their yards and used them as remedies, messages of love and a welcome to guests. The Chinese and Japanese would use fragrant incense to tell important stories.

With rampant deforestation and habitat loss now, we are losing many of these naturally growing fragrant plants. This has multiple consequences, including a breakage of the connection we humans have evolved with the entire world around us. Plants perfume our very consciousness and inner minds and have, over aeons, imbued our cultural and personal histories. Their fragrance — think of roses blossoming in the hills or champa flowers glowing white against the darkness of a hot



THAT WALK IN THE WOODS: California's redwoods have their distinctive smell

summer's night — make the place where we live 'our' area. They bring back where we came from, helping us revisit some of our most beautiful past moments. Losing fragrant plants means losing all these links. Importantly, we are also squandering special plant ingredients. In some cases, these can be created in a lab but that is with a single molecule. We are threatening unique medicinal plants — we aren't even aware of thousands of species which could hold wonderful qualities but are simply being wantonly destroyed with habitat change and the destruction of woods and wetlands. The loss of nature's fragrances threatens our history, our current senses and our future — we need to be aware of this.

### READERS WRITE

Dear Times Evoke, Thank you for making Saturday morning highly fruitful with the outstanding write-up (20th May) featuring B. Rosemary Grant. Charles Darwin's theory of evolution always seemed far-fetched to me. But I finally understand my science teacher now! — Dr Milinda Gupta, Chandigarh

Knowing how gene transfer works from one generation to another has made nature appear even more amazing to me! I was enthralled to read Rosemary Grant on climate change and species. Thank you, TE, for making us aware of how important it is to conserve nature. — Smita Singh, Lucknow

The stylishly-presented TE interview with Rosemary Grant was very enlightening about climate change. Such articles offer tremendous knowledge to readers and especially to those with a scientific mindset. — Akhil Verma, Dewas

B. Rosemary Grant's work made an excellent read! Few write-ups convey science with such clarity. The work established Darwinism with demonstrational depiction. Kudos, TE, for such intellectually stimulating articles! — DD Bhattacharya, Lucknow

Dear TE, you are very special for me! Every Saturday, I sharpen my brain by reading you! Your interview with B. Rosemary Grant on evolution was outstanding. TE's aesthetic presentations make complex science seem so lucid. Today's youngsters collect deep knowledge from TE in TOI. You most certainly boost me! — Prakash Kumar, Jamshedpur

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