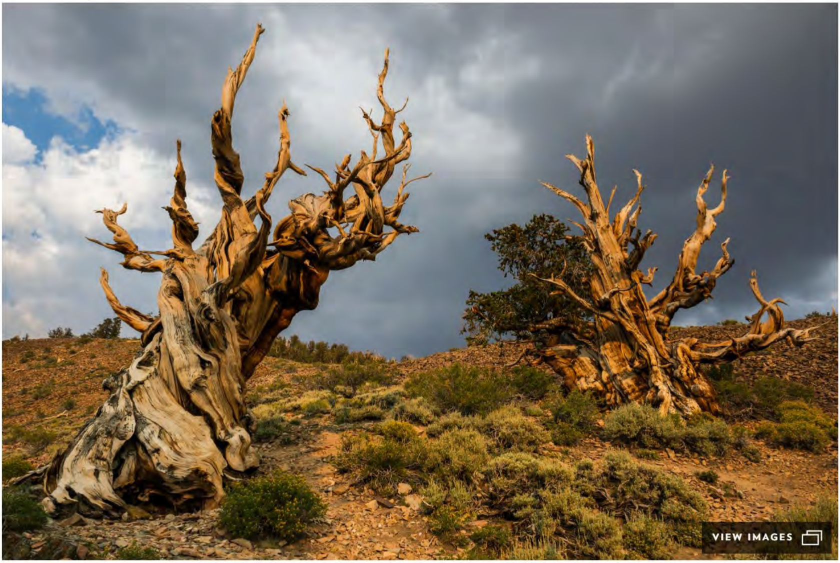
YOUR STORY HAS A SURPRISE BEGINNING
THE GENOGRAPHIC PROJECT
LEARN MORE
SUBSCRIBE NOW
NATIONAL GEOGRAPHIC

MAGAZINE

What We Can Learn from Trees

They inspire us, comfort us, and remind us how life moves on.



BRISTLECONE PINES | INYO NATIONAL FOREST, CALIFORNIA Convinced that tree rings could reveal Earth's climate history, scientist Edmund Schulman spent summers out West hunting the oldest living specimens. He found them in the gnarled, diminutive bristlecone pines. In 1957 Schulman discovered Methuselah, a bristlecone with 4,789 rings. (The ancient tree still stands, its location a guarded secret.) In 1964 another researcher was coring a spectacular specimen in Nevada to determine its age, when the drill bit broke. After the tree was cut down for study and its rings were found to total 4,862, scientists realized that they had unwittingly felled what was then the oldest tree known.

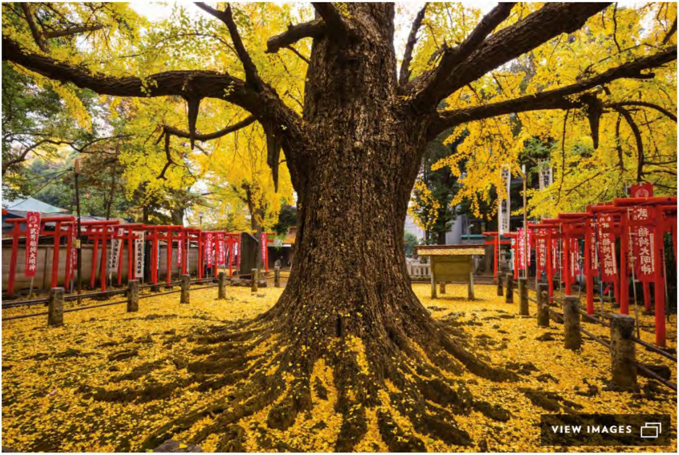
By **Cathy Newman**
Photographs by **Diane Cook and Len Jenshel**

This story appears in the March 2017 issue of *National Geographic* magazine.

Every tree tells a story, but some are beyond eloquent, holding memories, embodying belief, marking sorrow. We hold trees in our imagination, where they grow in strange, wonderful ways in forests inhabited by fantasy and also by our fears. In fable and legend, a forest shelters spirits, witches, and once upon a time, a big bad wolf.

Also white harts that leap just ahead of the hunter's arrow, and a hermit who may emerge just in time to nudge along a tale that ends happily ever after, but sometimes not.

We incorporate the rich metaphors that trees provide: We turn over a new leaf and branch out; ideas blossom and bear fruit. Though our momentum is sapped, our resolve remains deep-rooted, and yet there are times when we can't see the forest for the trees.



THE CHILD-GIVING GINKGO | TOKYO, JAPAN Tradition holds that this tree, which stands in the courtyard of the Zoshigaya Kishimojin Temple in Tokyo, brings fertility to worshippers. Though the goddess Kishimojin is a guardian deity of children, her backstory paints a darker picture. She fed her own offspring—possibly thousands—by devouring the children of others. To teach her a lesson, Buddha hid one of her children in an alms bowl. A distraught Kishimojin appealed to him, and he admonished her for the suffering she had caused. Suitably chastened, she vowed henceforth to protect all children.

VIEW IMAGES

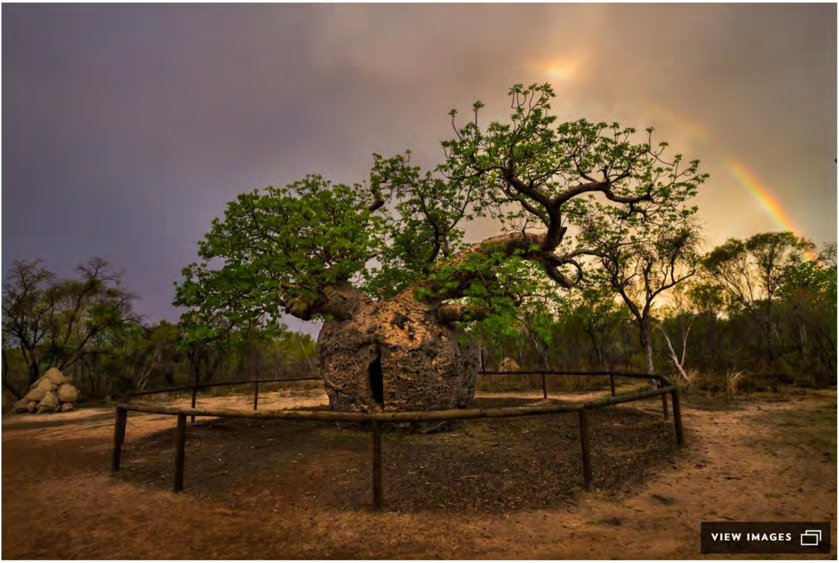
NEWTON'S APPLE TREE | LINCOLNSHIRE, ENGLAND

The apple that fell from the tree in front of Sir Isaac Newton's childhood home, Woolsthorpe Manor, did not, as myth suggests, smack the great man on the head. It landed, as apples do, on terra firma. But as an account published in 1752 said, it prompted a reverie that in time crystallized into the law of gravity. A storm felled the original "gravity" tree around 1820, but it remained rooted and regrew into the tree pictured above.

Trees inspire, not just through language, but through ideas. Surely the most notable coordinates in the atlas of inspiration converge in front of a tree—an apple tree, surrounded by a wicket fence, in an orchard in Lincolnshire, England. There, reputedly, in 1666, an apple fell and prompted a young man named Isaac Newton to wonder: Why would that apple always descend perpendicularly to the ground?

The spidery script of an 18th-century account in the archives of the Royal Society in London relates that Newton was home from Cambridge (plague had closed the university) when he stepped into the garden and into a reverie. Wrote his friend and biographer William Stukeley: "The notion of gravitation came into his mind ... occasion'd by the fall of an apple, as he sat in a contemplative mood."

It was not the first eureka moment associated with a tree. Hadn't Buddha reached enlightenment while meditating under the bodhi tree? Trees invite dreaminess. A tale told in many cultures recounts how a monk, listening to a bird sing in the woods, discovered that in a blink of time, hundreds of years had flown by. And after dipping his madeleine in tea made from the flowers of a linden, Marcel Proust's narrator fell into a "remembrance of things past" in the novel of the same name.



BOAB TREE | DERBY, AUSTRALIA The squat, bulbous boab has provided water, food, medicine, shelter, even burial crypts for Aboriginals, some of whom regard the tree as sacred. This boab in Western Australia is known as the Derby prison tree—erroneously, according to University of Tasmania historian Kristyn Harman and University of Adelaide architectural anthropologist Elizabeth Grant. Though the tree was reputed to be a holding cell or staging area for Aboriginal prisoners en route to Derby, Harman and Grant debunk the story as "a deliberate move to present it as a dark tourism site displaying colonial triumphs over Aboriginal people."

PEAR 'SURVIVOR TREE' | 9/11 MEMORIAL, NEW YORK, NEW YORK

‹ 1 / 4 ›

After the conflagration of 9/11 reduced the 110-story World Trade Center towers in Lower Manhattan to metal carcasses, after a day of black smoke and ghostly ash, after the horror of 2,753 dead, the last living thing pulled from the wreckage was a Callery pear tree. It became an exemplar of the botany of grief, but also of resiliency. The tree was scarred on one side (at left, above)—the side chosen to face the main walkway used by visitors. "So they could see the moment when the world changed," said Ronaldo Vega, the memorial's former senior director of design.

Trees are nature's memory stick, even at the molecular level. "Each growth layer that they put on every year contains a bit of the air from that year, transformed into carbon, and so the tree physically holds the years and years of the life of the city," Benjamin Swett, author of *New York City of Trees,* said in a radio interview.

Some memories sicken the heart, like those summoned by the chestnut that stood outside the house at 263 Prinsengracht, Amsterdam, where young Anne Frank and her family hid from the Nazis. From an attic window, the only one not blacked out, Anne could watch a tree mark the seasons before the Gestapo dragged her and her family away on August 4, 1944.

"How could I have known how much it meant to Anne to see a patch of blue sky ... and how important the chestnut tree was for her," her father said years later, after reading her diary. Anne Frank died of typhus in Bergen-Belsen concentration camp in February 1945. She was 15 years old. The tree—weakened by disease—was felled during a violent rainstorm in 2010.

MONTEZUMA CYPRESS | SANTA MARÍA DEL TULE, OAXACA, MEXICO Sixth-grade children from the Colegio Motolinía de Antequera line up in front of a Montezuma cypress known as el Árbol del Tule. The trunk, 119 feet in circumference and roughly 38 feet in diameter, supports a crown the size of almost two tennis courts. In the 1990s the Mexican government rerouted the Pan-American Highway and approved a grant to dig a well for the tree to mitigate damage caused by car exhaust and a falling water table.

RELATED STORIES

We Are Wired To Be Outside

New Crypt-Keeper Wasp Is Parasite That Bursts From Host's Head

The Singular Drama of New York Trees

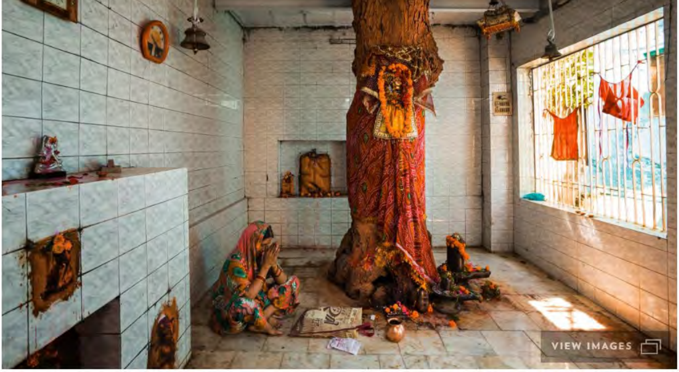
Some memories are collective, like those of innocence and loss embodied in another tree—the tree of the knowledge of good and evil in the Garden of Eden. It bore an apple of temptation, and there was hell to pay for its consumption.

If the dark side of the human condition can be said to originate under a tree, then it is fitting that its green shade offers consolation, like that provided by an American elm embraced by a low granite wall in Oklahoma City. On April 19, 1995, a blast planned and carried out by Timothy McVeigh, a disaffected veteran, destroyed the nine-floor Alfred P. Murrah Federal Building in the center of the city, incinerating cars and claiming 168 lives.

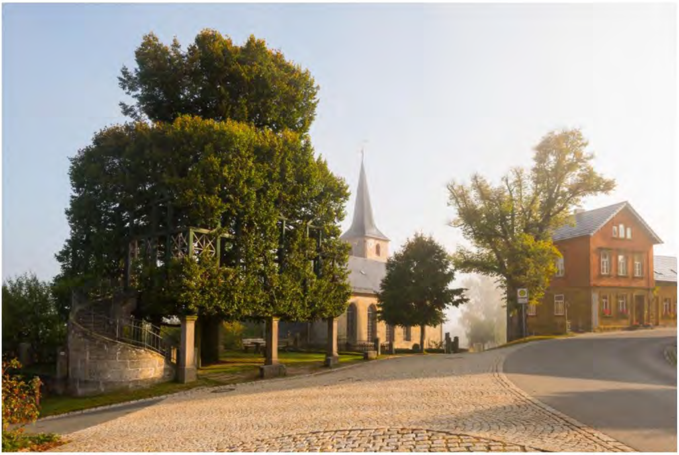
It also scorched the trunk, sheared off the leaves, and embedded debris in a nearly 35-foot-tall elm growing in a nearby parking lot. Today the "survivor tree" is a feature of the Oklahoma City National Memorial and Museum, and it provides solace to those like Doris Jones, whose 26-year-old daughter, Carrie Ann Lenz, pregnant at the time, perished in the explosion. "It comforts me to look at it," Jones said. "Something good survived something so bad."

Today the elm is more than 40 feet high, with a 60-foot-wide crown. By November, most of its gilded leaves have fallen. In January it is skeletal and bare. April brings the tender green of renewal, and in June it is fully dressed for summer. And so the celestial clock reverberates in the seasonal cycle of a tree whose branches bear the fruit of hope.

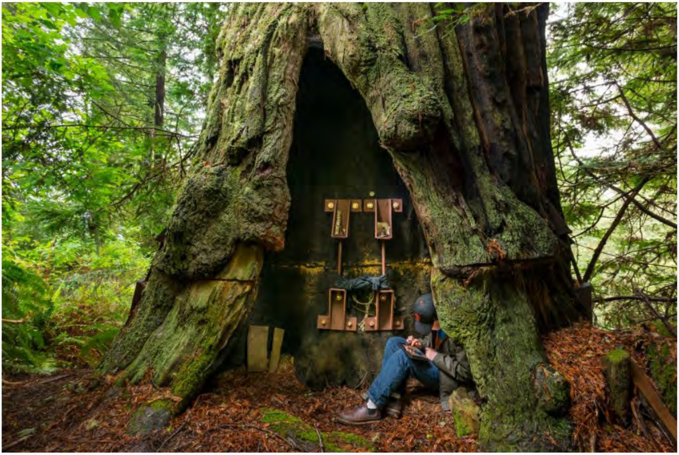
"It's as if that tree had a will to survive," said Mark Bays, an urban forester for the state who helped it recover. "It understood, when none of us understood, that it needed to be around."



NEEM TREE | VARANASI, INDIA In northern India the neem tree is known as the curer of all ailments and a manifestation of the Hindu goddess Shitala, a mother figure. To neighborhood residents who worship the tree at the Nanghan Bir Baba Temple, in Varanasi, it is that and more. "My son was born premature … The doctor told us he would surely die," one man told David Haberman, a professor of religion at Indiana University, who recorded the story. "But I prayed to this neem, and … he lived." The tree is dressed in cloth and wears a face mask of the goddess to strengthen the connection between her and worshippers.



TANZLINDE | PEESTEN, GERMANY In many parts of Europe, legend held that only the truth could be spoken under the linden tree, and so judicial hearings were held under its aegis. The Tanzlinde—or "dance linden"—in Peesten, Germany (above) is a centerpiece of social life, where festivals and dances are held. The original tree was planted in the late 16th century and died after World War II. It was replaced in 1951, and the dance platform, supported in part by the tree, was rebuilt in 2001.



COASTAL REDWOOD | HUMBOLDT COUNTY, CALIFORNIA In 1997, when logging operations in Northern California's Humboldt County threatened the more than thousand-year-old coastal redwood known as Luna, activist Julia Butterfly Hill climbed the tree and stayed there for two years, living on a small, tented platform 180 feet above the ground. Finally the logging company relented and agreed to a conservation easement. In 2000 vandals with a chain saw cut a three-foot-deep gash halfway around its circumference. Steel brackets and cables were installed to stabilize the tree, which continues to thrive.

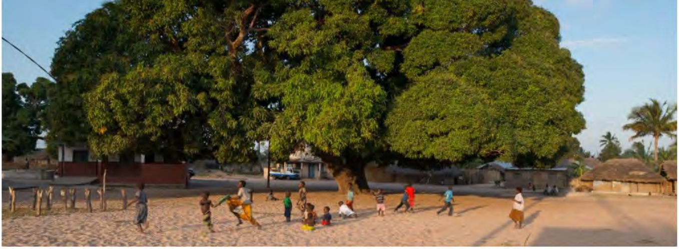
VIEW IMAGES

JUNIPER TREE | HALLELUJAH JUNCTION, CALIFORNIA

Shoes of every stripe festoon a juniper tree beside a lonely stretch of highway north of Hallelujah Junction, California. Some bear messages marking special occasions: baby shoes celebrating a birth, wing tips from a wedding, combat boots from a soldier's homecoming. Roadside signs warn of steep fines for littering, but one traveler's trash is another's arboreal art. One online guide to offbeat tourist attractions lists dozens of such "shoe trees" scattered over several U.S. states.

QUAKING ASPEN | FISHLAKE NATIONAL FOREST, UTAH

Though it sounds like the heavy in a grade B science fiction flick, the Pando clone, made up of 47,000 tree trunks covering 106 acres and weighing some 13 million pounds, is real. It's a single organism, a quaking aspen that began life as a single seed—possibly tens of thousands of years ago—and spread by sending up shoots from an expanding root system. (Pando is Latin for "I spread.") Each trunk is genetically identical and no more than 150 years old, but the root system may be the oldest living organism on the planet.



MANGO TREE | NAUNDE, MOZAMBIQUE A mango tree in Naunde, Mozambique, provides more than just shade from the sub-Saharan sun. Like other so-called palaver trees, it's a traditional setting for storytelling, ceremonies, and regulating village life. "A place to meet and talk, to seek compromise and settle disputes, to bridge differences and foster unity," wrote Kofi Annan, the former secretary-general of the United Nations, from Ghana, in his memoir. "If you have a problem and can't find a solution, you meet again tomorrow and you keep talking."

Your National Geographic Society membership helped fund this photo project. Find out how you can help support the Society's mission here.

Diane Cook and Len Jenshel are two of America's foremost landscape photographers, interpreting culture and environment for over 25 years.

COMMENT

NATIONAL GEOGRAPHIC
SUBSCRIBE NOW

YOU MIGHT ALSO LIKE

WEIRD & WILD

Watch: Bizarre Deep-Sea Squid Has Mismatched Eyes

Scientists have finally figured out why the cock-eyed squid has such strange peepers.

Natural Disasters Quiz: Are You a Master of Disasters?

Do you know a Force-5 from a Cat-5? Saffir-Simpson from Homer Simpson? Find out if you're a force of nature or...

Top 10 Most Visited National Parks

You may be surprised to learn which parks are the most popular.

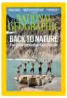
COMMENT ON THIS STORY

SEE PREVIOUS ISSUES

January 2017

December 2016

November 2016



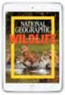
October 2016

MORE FROM NATIONAL GEOGRAPHIC

Subscribe to National Geographic Magazine

Subscribe to Our Other Award-Winning Magazines

Browse the Magazine Archive Since 1888



Get a Library of Ebooks and Films with Nat Geo PLUS

ABOUT THE MAGAZINE

Advertise With Us

Contact Us

Customer Services

Masthead

EVENTS

Hear live stories from explorers and photographers around the country.

See Locations Near You

EXHIBITS

Enjoy a variety of exhibitions that reflect the richness and diversity of our world.

Buy Tickets

FOLLOW US

SUBSCRIBE TO NEWSLETTERS

ENTER YOUR EMAIL

SIGN UP

We will never share your e-mail address unless you allow us to do so. View our privacy policy. Easy unsubscribe links are provided in every email.

FOLLOW US

Copyright © 1996-2015 National Geographic Society.
Copyright © 2015-2016 National Geographic Partners, LLC. All rights reserved

TERMS OF SERVICE
PRIVACY POLICY
CUSTOMER SERVICE
JOBS