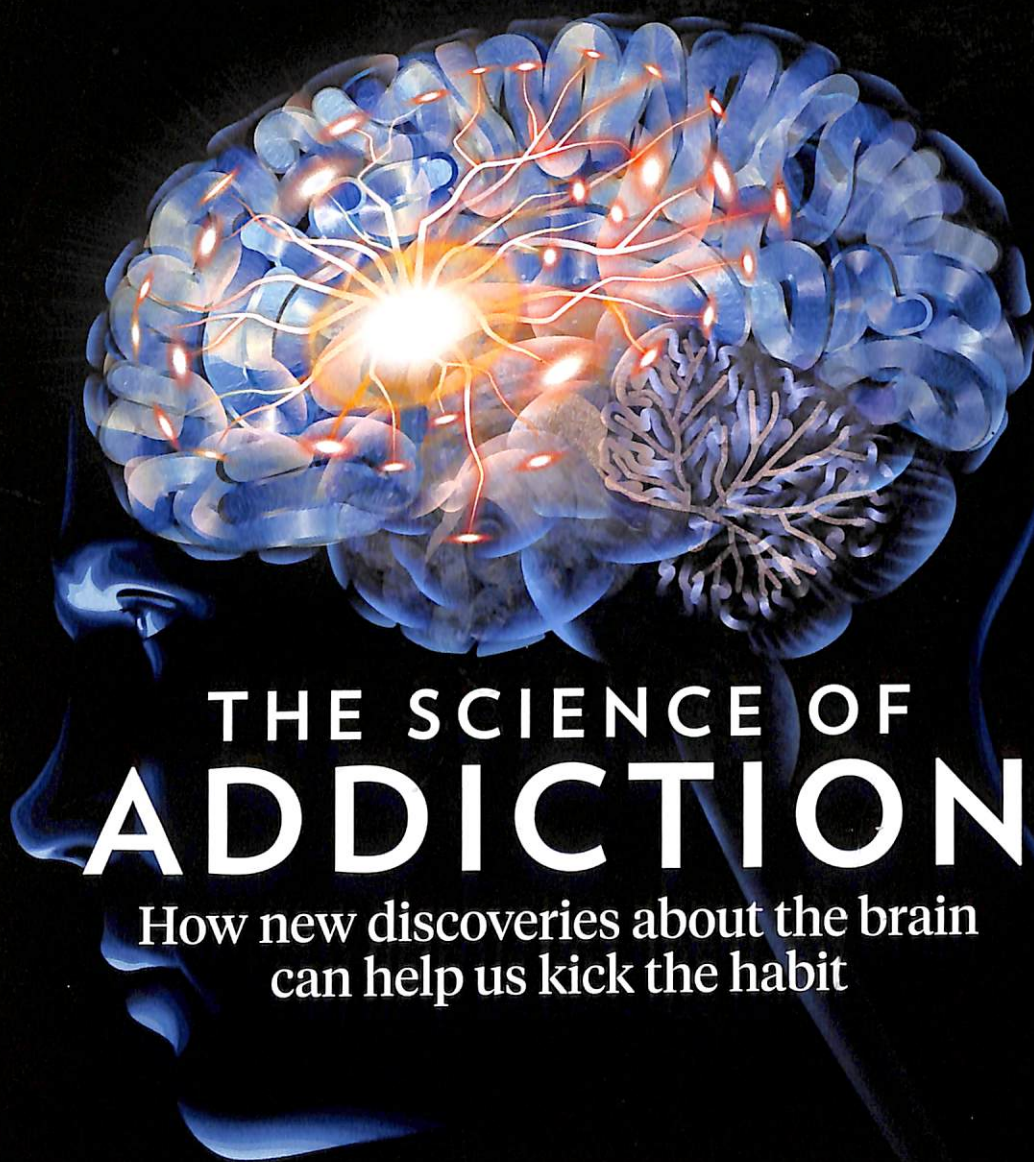


VOL. 5 ISSUE 2

FOODS TO FAVOR | PROSTHETIC HANDS THAT FEEL | WHY EMOTIONS MATTER

NATIONAL GEOGRAPHIC MAGAZINE



THE SCIENCE OF ADDICTION

How new discoveries about the brain
can help us kick the habit

NGM.COM SEPTEMBER 2017 \$295

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On the Cover In this drawing of a brain, the burst of light looks like how a surge of dopamine might feel. A chemical neurotransmitter that carries signals across synapses, dopamine plays a key role in addiction by boosting desire for the addictive substance or behavior. *Illustration by Daniel Hertzberg*

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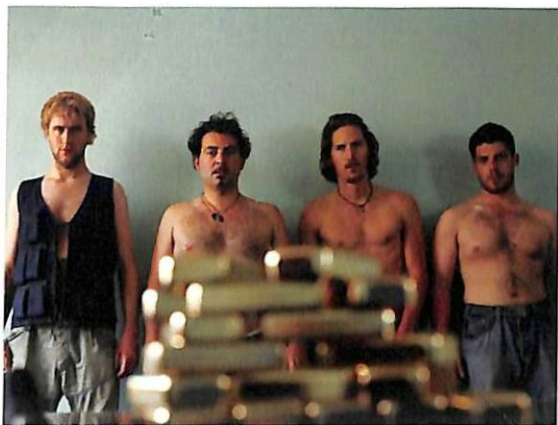
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BANGED UP ABROAD

Through dramatic reenactments and interviews, the show relives harrowing incarceration stories of individuals jailed on foreign soil. Aired on September 28 on National Geographic, Thursdays to Fridays at 7 p.m.



TELEVISION

TOP CATS

The series takes a thrilling look at the lives of big cats, showcasing their strength, speed and supreme ability for survival. Aired on September 4 on National Geographic, Mondays to Fridays at 8 p.m.



TELEVISION

SUPERCAR MEGABUILD

In the show's second season, British mechanics embark on a mission to transform an ordinary car into a supercar, fit for the racetrack. Aired from September 9 on National Geographic, Saturdays and Sundays at 10 p.m.



TELEVISION

YEAR MILLION

A six-part docudrama, the series paints a fascinating picture of what it might be like to be human 1 million years into the future. Premieres on September 25 on National Geographic, Monday at 10 p.m.



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TELEVISION

NAT GEO BLOCKBUSTERS

Exploring the myth and drama around seven greatest events and people in recent history, this series is storytelling at its most captivating. Some of the highlights include the biggest interplanetary spacecraft's dive into Saturn's atmosphere, a recounting of the legend of Atlantis, voiced by filmmaker James Cameron, and a compelling portrait of Princess Diana. Premieres on September 1 on National Geographic, Friday at 10 p.m.

TELEVISION

REPTILE KINGS

Fierce and adaptable, reptiles are some of the most lethal creatures in the world. On the show, renowned experts track them down and explore how they may be evolving into deadlier forms. Aired from September 4 on Nat Geo Wild, Mondays to Fridays at 8 p.m.

BOOKS

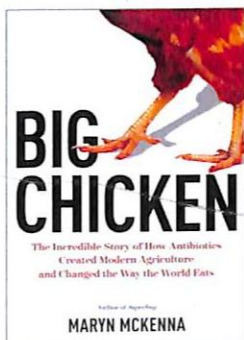
STUNNING MAPS, IMAGES FILL ATLAS

Reimagined and updated, National Geographic's *Visual Atlas of the World, 2nd Edition*, is 416 pages of breathtaking photography and state-of-the-art cartography. The atlas goes on sale September 19 at shopng.com/books and wherever books are sold.

BOOKS

HOW 'WONDER DRUGS' CHANGED CHICKEN

Chicken is a staple of diets worldwide, yet many consumers know little about the use of antibiotics in poultry production. Journalist Maryn McKenna reveals the role that these drugs play in industrial farming in *Big Chicken*, available at shopng.com/books and wherever books are sold.



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On the Cover Gleaming buildings define Dubai. It's one of the cities featured in our Urban Expeditions series, an initiative made possible by a grant from United Technologies to the National Geographic Society. Photo by Luca Locatelli

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By Jeremy Berlin, Photographs by Mariusz Janiszewski

TELEVISION

X: THE GENERATION THAT CHANGED THE WORLD

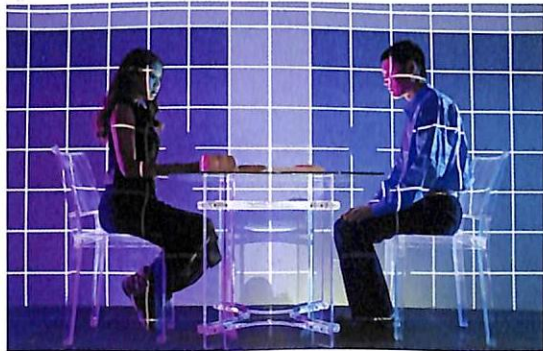
The X-ers were initially thought to be slackers. But as this series highlights, Gen X was instrumental in fomenting a digital revolution, shattering stodgy family dynamics and creating a progressive social mindset. *Airs from October 20 on National Geographic, Friday 10 p.m.*



TELEVISION

BREAKTHROUGH

Mankind's greatest inventions and challenges – aging, artificial intelligence, brain mapping – are explored by some of Hollywood's biggest directors like Ron Howard, Brett Ratner and Paul Giamatti in the second season of this series. *Airs from October 21 on National Geographic, Saturday 10 p.m.*



NAT GEO WILD

MAN VS ANIMAL

These are the stories of how modern life pits humans at odds with nature, upsetting the ecosystem relied on by so many animals for existence. *Airs from October 30 on Nat Geo Wild, Monday to Wednesday 9 p.m.*



NAT GEO WILD

ULTIMATE WILD FEST

Find out what happens when some of the animal kingdom's fiercest beasts, like lions, elephants and grizzly bears, are challenged for survival. *Airs on Nat Geo Wild, Saturday to Sunday 10 a.m.*



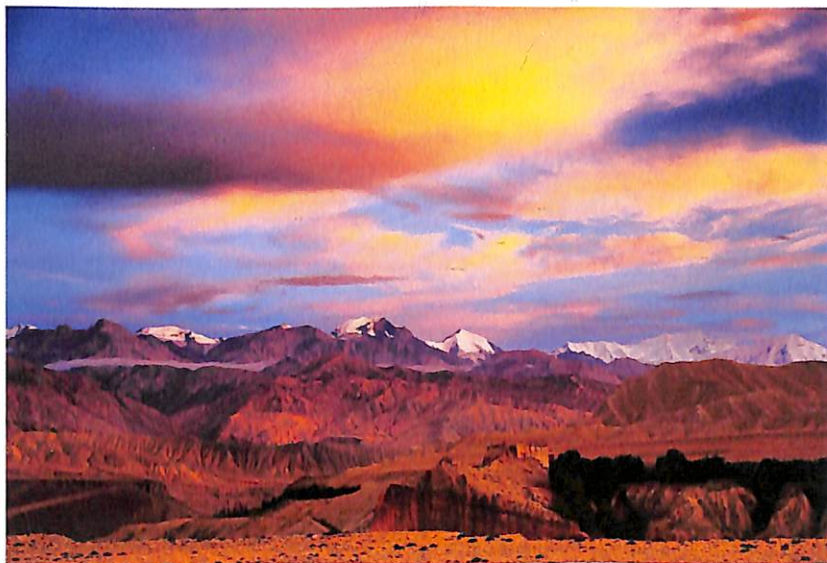
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MYSTERY OF THE HIMALAYAN MUMMIES

The Himalayas were among the last places on Earth where early humans settled. Ancient human DNA recovered from caves reveals a remarkable twist in the evolutionary story of modern Himalayan peoples. These archaeological and genetic studies are unprecedented, using cutting-edge science to unlock the secrets of our past. **Airs on October 6 on National Geographic, Friday 10 p.m.**



TRAVELLER MAGAZINE

THE GREAT AMERICAN GUIDE

Arles, Vincent van Gogh's iconic home in France, ancient Thangka artworks in Leh, conversations with Kabir Khan and Nucleya and finally, journeys through some

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SNAKES IN THE CITY

Snake-catcher Simon Keys and his girlfriend Siouxsie Gillett face some of the world's deadliest snakes and release them into the wild. **Airs from October 26 on National**



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PRIME AT 9

Survival stories, automobile makeovers, investigations of scientific phenomenon and a tour of India's mega kitchens, watch the best of National Geographic's stories at the best of times. **Airs**



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Children in poor nations often go without the vaccines that rich nations take for granted. As a result, hundreds of thousands of young lives that could have been saved are lost.

By Cynthia Gorney Photographs by William Daniels

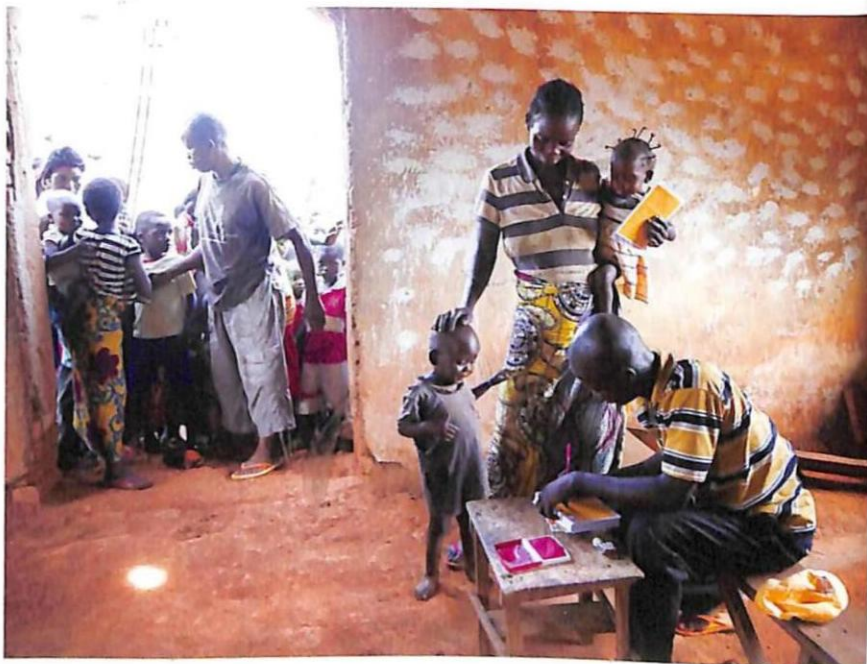
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A conversation with Martha Raddatz (above) about *The Long Road Home* from war.

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On the Cover A young man makes an exuberant leap from a diving platform into Copenhagen's harbor. Denmark frequently takes the top spot in the annual World Happiness Report.

Photo by Cory Richards

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NASA astronaut Terry Virts has been a space shuttle pilot, a crew member on a Soyuz spacecraft, and a commander on the International Space Station (left). He's spent more than 200 days in space – and during most of them, he's taken photos. The new book *View From Above* presents 300 of Virts's breathtaking images, as well as reflections on how life aloft has shaped him. It's available where books are sold and at shopng.com/books.

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PHOTOS: TERRY VIRTS, NASA; SCOTT SUCHMAN (BEER)

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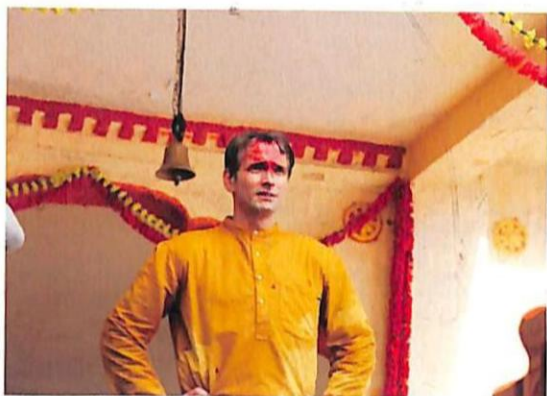
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On the Cover For this "Head of Christ" that Rembrandt painted in the late 1640s, art historians think it's likely that he worked from a live model, perhaps a young Jew from the artist's Amsterdam neighborhood.
Photo: Bridgeman Images

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2017 REVISITED

As the year winds up, we rewind highlights from our programming slate. This is your chance to catch up with all that you might have missed. From acclaimed miniseries such as *Mars* and docudramas like *Genius* to exclusive local content *Inside Tirumala Tirupati* and *Inside INA*, the line-up will include drama, wildlife, science & tech, and action-adventure. Airs all month from December 4 on *National Geographic*, every Monday to Friday 10 p.m.



TELEVISION

RARE: CREATURES OF THE PHOTO ARK

This three-part natural history series follows *National Geographic* photographer Joel Sartore on his globetrotting quest to capture some of the rarest animals in the world. These arresting studio portraits of over 5,000 species go into the Photo Ark, Joel's 25-year-long project to document these animals before they go extinct. Premieres on December 18 on *National Geographic*, Monday 8 p.m.



NAT GEO WILD

WINTER IN THE WILD

From the survival story of Antarctica's emperor penguins to battles between predators in the remote Scandinavian north, the show explores how the animal kingdom adapts to the harshest cold climates on the planet. Airs from December 2 on *Nat Geo Wild*, Saturday and Sunday 8 p.m.



NAT GEO WILD

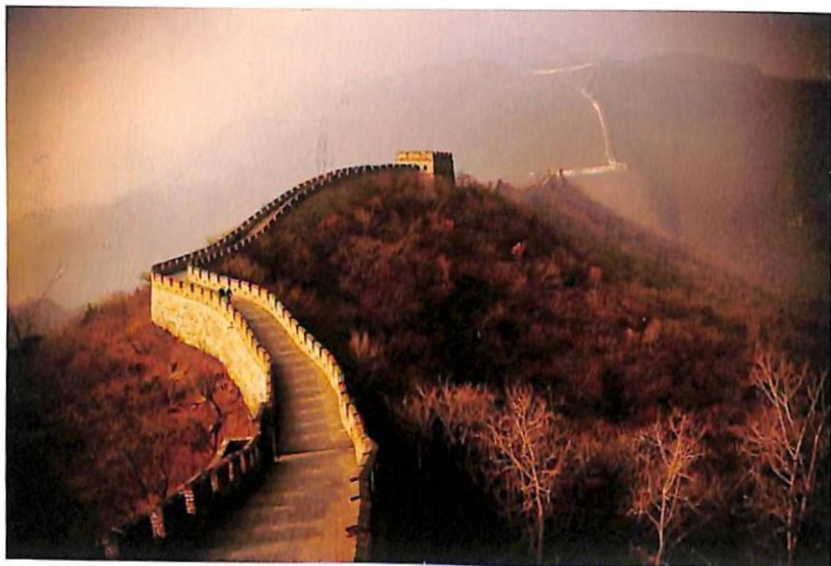
SNAKES IN THE CITY

Streetwise snake-catchers Simon Keys and Sioux Gillett race across Durban in South Africa to capture the world's deadliest snakes and release them back into the wild. Watch them wrestle with black mambas in scrap yards and spitting cobras in convents. Airs from December 18 on *Nat Geo Wild*, Monday 8 p.m.



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SCENES FROM A 'VISUAL ATLAS'

Combine state-of-the-art cartographic technology with incomparable photography, and the result is the second edition of National Geographic's *Visual Atlas of the World*. Completely updated, this 416-page book includes 200-plus maps and more than 400 new photos, from satellite imagery to scenes of UNESCO World Heritage sites such as the Great Wall of China (left). An authoritative reference, it's available wherever books are sold and at shopng.com/books.

TELEVISION

AIRPORT SECURITY: COLOMBIA

This is a gripping account of anti-narcotics units in Bogota's El Dorado airport working to ensure the safety of passengers and seize illegal contraband. *Season 2* airs from December 11 on *National Geographic*, Thursday and Friday 7 p.m.

NAT GEO WILD

WILD STRATEGIES

Every creature has its own design for survival in the wild. This show zeroes in on the modes of defence, communication and mating employed by all manner of species in the toughest situations. Airs from November 20 on *Nat Geo Wild*, Monday to Friday 8 p.m.



BOOKS

WALK 'IN THE FOOTSTEPS OF JESUS'

A lushly illustrated account of the life and times of Jesus of Nazareth, the second edition of *In the Footsteps of Jesus* takes readers to places and events that changed the world. Available wherever books are sold and at shopng.com/books.

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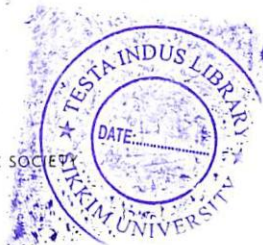
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Wild birds connect us to a nature that's rapidly receding. They live in a spectacular variety of habitats and signal each one's ecological health. Birds – with their brilliant plumage, their trills, and their flight – nurture our souls.

By *Jonathan Franzen*
Photographs by *Joel Sartore*



On the Cover Today one in eight bird species is threatened with global extinction, BirdLife International reports. This species is the blue-crowned pigeon, *Goura cristata*. Photo by *Joel Sartore*

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INDIA'S PARTITION

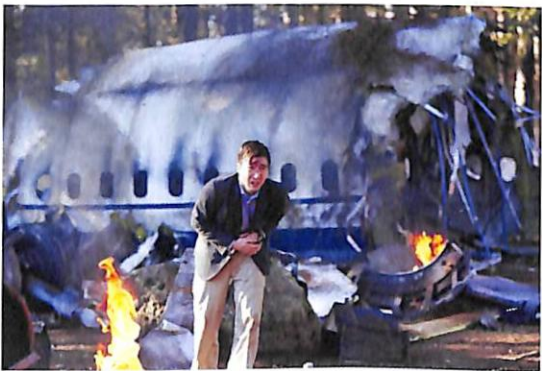
This is a poignant look at the Indo-Pak Partition through the eyes of the British filmmaker Gurinder Chadha. To understand what propelled this historic event, Chadha interviews a broad spectrum of people whose lives were torn apart by the partition. Premieres on January 25 on *National Geographic*, Thursday 9 p.m.; Repeat on January 26 on *National Geographic*, Friday 12 p.m.



TELEVISION

AIR CRASH INVESTIGATION

Every time a plane crashes, the world takes notice. And so do the experts whose job it is to figure out what happened. *Air Crash Investigation's* all new season uncovers the truth behind the most legendary aviation disasters using state-of-the-art CGI, captivating re-enactments and eyewitness accounts. Premieres on January 10 on *National Geographic*, Wednesday to Friday 11 p.m.



NAT GEO WILD

SAVAGE KINGDOM

In Season 2 of the gripping wildlife series, Sekekama, the undisputed king of the Marsh Pride, must contend with rivals to his throne. His three princes are hungry for power, threatening to overthrow the king. Premieres on January 15 on *Nat Geo Wild*, Monday 8 p.m.



NAT GEO WILD

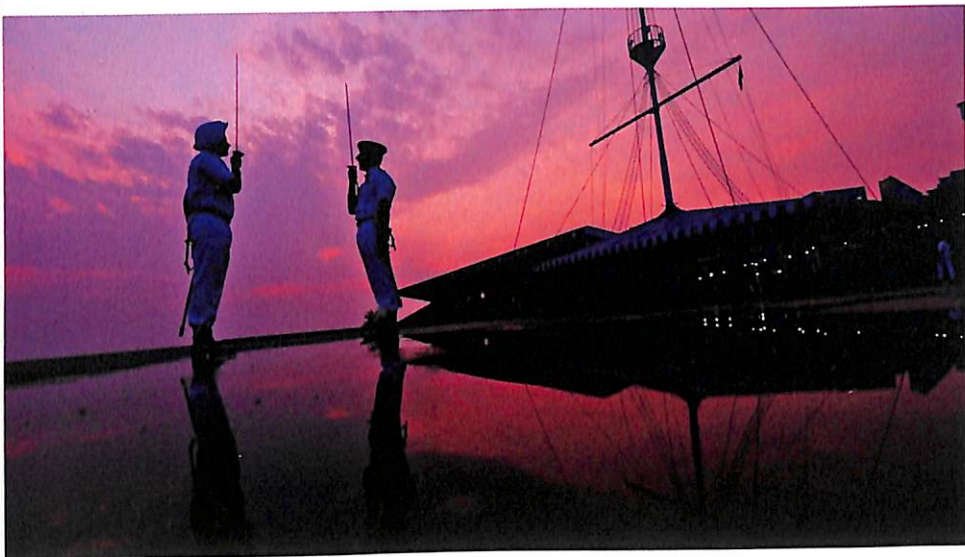
MONSTER FISH

Zeb Hogan is on a global expedition to find some of the world's largest fish. His incredible adventures will lead him through the U.S.A., Western Europe and the far-flung jungles of South America. Premieres January 22 on *Nat Geo Wild*, Monday to Friday 8 p.m.



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ELSEWHERE



TELEVISION

INSIDE INDIA

As India marks its 68th Republic Day, we line up a series of programming that spotlights the best stories of the nation. From the epicentre where the next generation of naval leaders are trained to the biggest kitchens and the grandest festivals, we celebrate India in all its multitudes and glory. Airing all month from January 1 on *National Geographic*, Monday to Friday 10 p.m. onwards.

TELEVISION

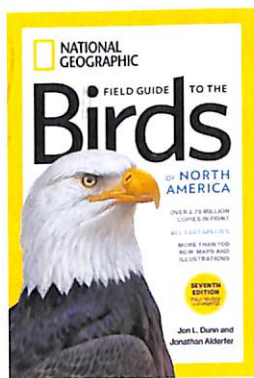
MEGA TRANSPORT

The series focuses on heavier, complicated and more unusual modes of transport. These carriers require pinpoint planning in specific time slots and special safety precautions. All of this requires months of planning and preparation. Airing from January 8 on *National Geographic*, Monday to Tuesday 7 p.m.

BOOKS

KNOW YOUR BIRDS OF NORTH AMERICA

Kick off National Geographic's Year of the Bird with *Field Guide to the Birds of North America, Seventh Edition*. Completely revised, it's full of hand-painted illustrations, new and updated maps, essential identification details, and more. Available wherever books are sold and at shopng.com/books.



TRAVELLER MAGAZINE

EXPLORE THE BEST OF INDIA AND THE WORLD IN 2018

Discover spectacular places to visit in the year ahead across India from royal retreats in Rajasthan to Mechuka in Arunachal Pradesh. Also, a global list of 2018's hottest destinations which includes Oaxaca, Mexico's most colourful state, and Dublin, the world's friendliest city.

Subscriptions For subscriptions in India call 022-49188881/2/3/4. For online subscriptions log on to www.getnationalgeographic.com

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Why local leaders must tackle global issues: a talk with **Michael Bloomberg**

VISIONS

EXPLORE

Take a tour of cities that are futuristic, frigid, and buzzing; scanned from the sky; and built to sell goods.

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106 | BIRD BRAINIACS

A century ago, scientists believed that birds' brains weren't capable of the higher cognitive functioning found in humans and some other mammals. Now we know better.

By Virginia Morell Photographs by Charlie Hamilton James



On the Cover More than 1700 satellites owned by government, academic, and private entities orbit above us. They gather images and other data, broadcast information, and monitor locations and communications. Illustration by Nick Kaloterakis

Corrections and Clarifications
Go to natgeo.com/corrections.

28 | THEY ARE WATCHING YOU

The demand for security is increasing. Monitoring technology is proliferating. The result: We're all under surveillance.

By Robert Draper

64 | WHERE WILDLIFE REIGNS

The Falkland Islands have often been contested ground. Today they shelter a dense and diverse population of wildlife.

Story and photographs by Paul Nicklen

80 | FEEDING CHINA

With less than a tenth of the farmland but nearly a fifth of the population in the world, China must reshape its agriculture.

By Tracie McMillan
Photographs by George Steinmetz

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ELSEWHERE

NAT GEO WILD

NEW SEASON: MONSTER CROC WRANGLER

In Australia's Northern Territory saltwater crocodiles have been protected for over 40 years. But the bigger they become, the greater the need to protect them from human encounters. Season 3 sees at least one monster croc being caught per episode. Premieres on February 19 on *Nat Geo Wild*, Monday to Wednesday 8 p.m.



TELEVISION

THE STORY OF US

From the team behind *The Story of God with Morgan Freeman* comes the new six-part series, *The Story of Us with Morgan Freeman*. At a time when events seem to be driving cultures apart, Morgan Freeman goes on a global journey to understand how human culture has taken so many remarkable forms. Premieres on February 8 on *National Geographic*, Thursday and Friday 10 p.m.



NAT GEO WILD

RARE: CREATURES OF THE PHOTO ARK

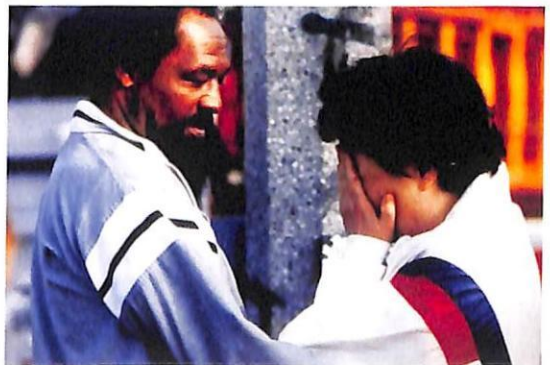
The show is a three-part natural history series that follows National Geographic photographer Joel Sartore on his globetrotting quest to photograph some of the rarest animals in the world. Premieres on February 12 on *Nat Geo Wild*, Monday 7 p.m.



TELEVISION

L.A. 92

Twenty-five years after the verdict in the Rodney King trial sparked several days of protests, violence and looting in Los Angeles, *LA 92* immerses viewers in that tumultuous period through rare footage. Premieres on February 12 on *National Geographic*, Monday at 11 p.m.



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TELEVISION

HELL ON EARTH: RISE OF ISIS

Academy-Award nominated filmmaker Sebastian Junger and Emmy winner Nick Quested chronicle Syria's descent into the unbridled chaos that allowed the rise of the Islamic State. Pulling from nearly 1,000 hours of footage, they capture the Syrian war's carnage, political and social consequences, and human toll, while painting an alarming picture of the West's role in the creation of ISIS. Premieres on February 19 on *National Geographic*, Monday 11 p.m.



TELEVISION

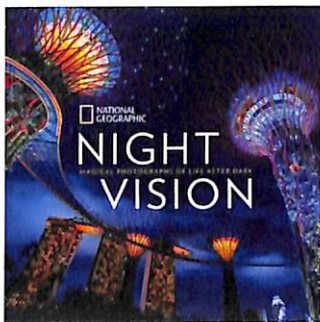
BIG CAT WEEK

Lions, tigers, cheetahs, jaguars, cougars and more – big cats are revered around the world, yet some of the most threatened species. Nat Geo shines a light on their struggle. Airs between February 26–March 4 on *National Geographic*, Monday to Sunday 8 p.m.

BOOKS

THE DARK BEAUTY OF NIGHT VISION

Revel in the beauty of the world after dark – starlit skies, glowing cities, nocturnal animals – with the new National Geographic photography collection *Night Vision*. Available where books are sold and at shopng.com/books.



BOOKS

JOURNEYS MADE FOR SWEETHEARTS

For intrepid couples who like adventure and culture on their getaways, *Ultimate Journeys for Two* is the ideal gift. This guide to hidden-gem destinations is available where books are sold and at shopng.com/books.

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FROM THE EDITOR

Singer-songwriter **Paul McCartney** on skipping meat one day a week

VISIONS

EXPLORE

Wellness The health benefits of coffee and mushrooms; printing a human organ; and longevity tourism in China

On the Cover Peggy Whitson has spent more days in space than any other U.S. astronaut: 665, accumulated over three flights. Raised in Iowa, Whitson is also the first woman to serve as NASA's chief astronaut and the first woman to command the International Space Station. "As I've traveled farther away from that farm in Iowa," she says, "my sense of what home is has expanded. Since being in space, home is actually planet Earth." Photo by Dan Winters

Corrections and Clarifications

Go to natgeo.com/corrections.

FEATURES

40 | EPIC JOURNEYS

Why do some birds migrate thousands of miles? How are they able to find their way to the same summer and winter sites year after year? Even as researchers answer those questions, they're discovering how humans disrupt these ancient journeys.

By Yudhijit Bhattacharjee Photographs by Stephen Wilkes



68 | BEYOND THE BLUE MARBLE

Earth, in astronauts' eyes.

By Nadia Drake
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Martin Schoeller

86 | WHEN LIFE GOT COMPLICATED

From microbes to animals.

By David Quammen
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106 | DRYING LAKES

The world's inland waters suffer due to overuse, climate change, and drought.

By Kenneth R. Weiss

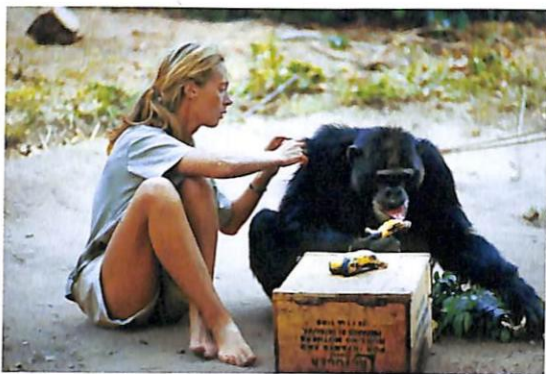
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ELSEWHERE

TELEVISION

FINDING JANE

Director Brett Morgen tells the story of Jane Goodall, a woman whose chimpanzee research challenged the male-dominated scientific consensus of her time and revolutionized our understanding of the natural world. The film offers an intimate portrait of one of the world's most admired conservationists. Premieres on March 16 on *National Geographic* and *Nat Geo Wild*, Friday at 8 p.m.



TELEVISION

UNDERSTANDING THE CHAIN OF COMMAND

Chain of Command essays the American war against violent extremism, and the men and women devoting their lives to it. It inhabits the innermost sanctums of the Pentagon and the front lines of battlefields. Premieres on March 23 on *National Geographic*, Friday at 11 p.m.



TELEVISION

UNLEASHING CREATIVE POTENTIAL IN BREAKTHROUGH

Breakthrough delves into the social, ethical and economic questions raised by the potentially world-changing innovations. Airs March 8 on *National Geographic*, Thursday and Friday at 10 p.m.



NAT GEO WILD

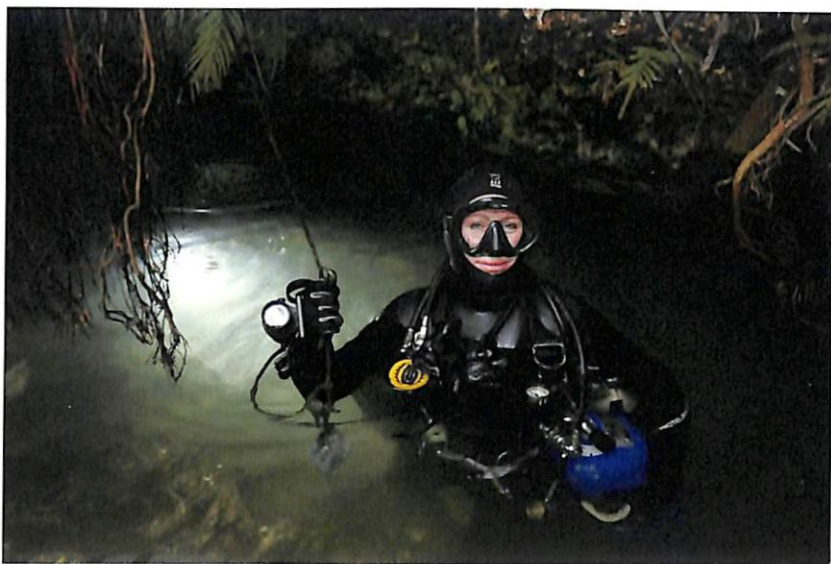
THE WORLD OF NATURAL BORN MONSTERS

In every episode, host Sean Duggan goes in search of one monster and at the end of the hour there is always an exhilarating, dangerous discovery. Premieres March 26 on *Nat Geo Wild*, Monday to Friday at 8 p.m.



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ELSEWHERE



TELEVISION

EXPLORING ONE STRANGE ROCK

Take a mind-bending tour of one of the universe's most peculiar and remarkable places: Earth. In the 10-part series *One Strange Rock*, award-winning filmmaker Darren Aronofsky tells the story of how our planet formed and generated so many natural wonders (among them ancient caves in the Bahamas that diver Becky Kagan Schott has explored, left). Actor Will Smith hosts the series. Premieres on March 26 on *National Geographic*, Monday at 9 p.m.

TELEVISION

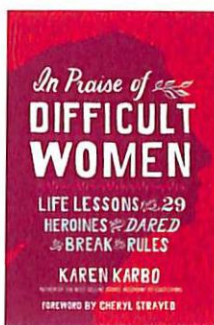
NEW SEASON: YEARS OF LIVING DANGEROUSLY

The series returns with a lineup of passionate Hollywood actors, who share first-person accounts from locations. Aired March 5 on *National Geographic*, Monday to Wednesday at 10 p.m.

BOOKS

SPEND QUALITY TIME WITH DIFFICULT WOMEN

What do Frida Kahlo, J. K. Rowling, and Angela Merkel have in common? They are among the "29 heroines who dared to break the rules" and are featured in the new *National Geographic* book *In Praise of Difficult Women*. It's available where books are sold and at shopng.com/books.



BOOKS

APPRECIATING THE WISDOM OF WOLVES

During six years observing an Idaho wolf pack, Jamie and Jim Dutcher saw traits such as curiosity, compassion, and kindness. Their reflections fill *The Wisdom of Wolves: Lessons From the Sawtooth Pack*, available where books are sold and at shopng.com/books.

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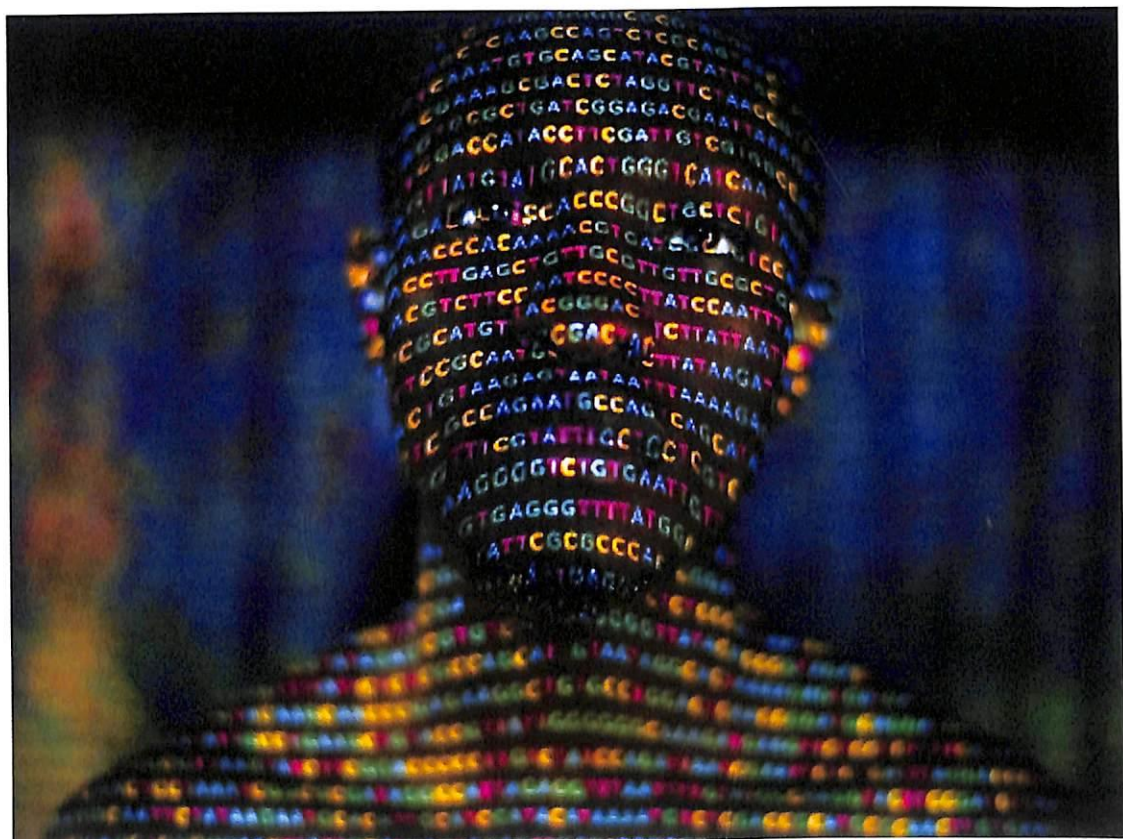
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THE RACE ISSUE

To mark the 50th anniversary of Martin Luther King, Jr.'s assassination, we explore what race means in the 21st century.



44 | SKIN DEEP

What is race? Science tells us there is no genetic basis for it. Instead it's largely a made-up label, used to define and separate us.

By Elizabeth Kolbert Photographs by Robin Hammond

60 | WHAT DIVIDES US

Human beings are wired at birth to distinguish Us from Them and to favor our own group. Can science help us bridge the divides?

By David Berreby Photographs by John Stanmeyer

ON THE COVER

Marcia (left) and Millie Biggs, both 11, say people are shocked to learn that they're fraternal twins. Marcia looks more like their mother, who's English, and Millie looks more like their father, who's of Jamaican descent. See more about the twins on page 28. Photo by Robin Hammond

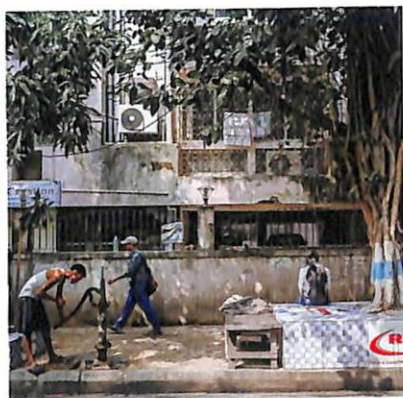
#IDefineMe Science defines you by your DNA. Society defines you by the color of your skin. How do you define yourself?

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THE RACE ISSUE

32 | STREETS IN HIS NAME

More than a thousand streets across the world bear Rev. Martin Luther King, Jr.'s name. How do these roads reflect the civil rights icon's values and teachings?
By Wendi C. Thomas



92 | DAWN OF WHITE MINORITY

The demographic changes rippling across America are fueling anxiety among some whites.
By Michele Norris
Photographs by Gillian Laub



84 | COLORS OF MATRIMONY

The growing acceptance of relationships across racial and ethnic lines can be seen at a New York City marriage bureau.
By Patricia Edmonds
Photographs by Wayne Lawrence



114 | THE STOP

Traffic stops – the most common interaction between police and the public – are a flash point in the debate over race.
By Michael A. Fletcher
Photographs by Wayne Lawrence



COMING UP

DIVERSITY IN AMERICA

This year *National Geographic* will offer multimedia coverage of racial, ethnic, and religious groups and examine their changing roles in 21st-century life.

THE SERIES WILL INCLUDE:

MUSLIMS

In the United States, nearly 3.5 million Muslims from some 75 countries are experiencing opportunity – and opposition.

LATINOS

Latinos in the United States come from many races. Now at about 18 percent of the population, they're the nation's largest minority group.

ASIAN AMERICANS

South Asians are a major force in medicine, technology, and business. Today they're playing increasingly prominent roles in mainstream American culture. Also: We revisit some of the 120,000 Japanese U.S. citizens incarcerated during World War II.

NATIVE AMERICANS

Their culture at times erased or appropriated, Native Americans are rising up to fight the marginalization they've endured.

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ELSEWHERE

TELEVISION

THE GENIUS OF PICASSO

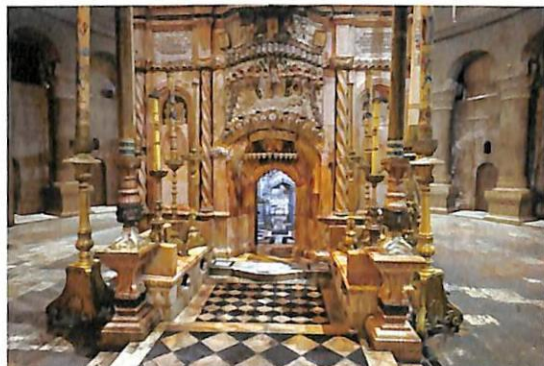
The 10-part series is back with its second season. Starring Antonio Banderas, it explores one of 20th century's most influential artists – Pablo Picasso. Find out all about the genius – from his political alliances to his numerous affairs, and how he constantly reinvented himself to push the boundaries of artistic expression. Premieres on April 25 on *National Geographic*, Wednesday at 10 p.m.



TELEVISION

DISCOVER THE SECRETS OF CHRIST'S TOMB

Follow experts on a quest to unlock the mysteries surrounding the Tomb of Christ. A team of leading scientists use the latest scientific techniques to restore the edicule housing the tomb. Tests indicate the remnants of the tomb dates to the fourth century – a discovery that could revolutionise all we know about the tomb. Premieres on April 1 on *National Geographic*, Sunday at 10 p.m.



NAT GEO WILD

TUNE INTO THE SYMPHONY FOR OUR WORLD

National Geographic embarks on a journey of artistry and science through a musical exploration of the sea, shore, mountains and sky with a varied and stunning composition. The show weaves together breathtaking discoveries and intimate portraits of wildlife. Premieres on April 22 on *Nat Geo Wild*, Sunday at 9 p.m.



TELEVISION

JACKIE CHAN'S GREEN HEROES

Millions of tourists visit the Tibetan Plateau and the Nianbaoyu mountains. But with growth come mountains of trash. Actor Jackie Chan and Arthur Huang, a specialist in post-consumer trash recycling, develop an off-grid mobile unit called "Trashpresso." Aired on April 22 on *National Geographic*, Sunday at 10 p.m.



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ELSEWHERE

TELEVISION

THE LAST DROP: INDIA'S WATER CRISIS

Follow the experts who have spent years working on water and environment related issues in India, shed light on the roots of India's water crisis. Catch stories of individuals or communities that are setting an example with their efforts aimed at preserving and consciously using water. *Airs on April 17 on National Geographic, Tuesday at 10 p.m.*



TELEVISION

MISSION CRITICAL: LEOPARDS AT THE DOOR

National Geographic photographers go on assignment, it's not just a job – it's a mission. They travel to every corner of the globe to show us what we need to know now – to save species from extinction, protect ourselves, and make way for a better, more sustainable planet. *Airs on April 20 on National Geographic, Friday at 10 p.m.*



TELEVISION

BEFORE THE FLOOD WITH LEONARDO DICAPRIO

Actor and U.N. Messenger of Peace Leonardo DiCaprio interviews individuals from every facet of society in both developing and developed nations who provide unique views on what must be done to prevent catastrophic disruption of life on our planet. *Airs on April 18 on National Geographic, Wednesday at 10 p.m.*



NAT GEO WILD

DEADLY FIGHTS

Deadliest Week Ever features deep sea killers who explore many ways to hunt, eat and die in the ocean and the monsters terrorizing the jungles with their toxic weapons. We reveal how animals fight for survival and hunt down their prey in a world filled with dangers. *Premieres on April 30 on Nat Geo Wild, Friday at 9 p.m.*



NATIONAL GEOGRAPHIC MAGAZINE



*"When I was a child,
my mother said
to me, 'If you become
a soldier, you'll be
a general. If you
become a monk, you'll
end up as the pope!'
Instead, I became
a painter and wound
up as Picasso."*

ARTIST
PROVOCATEUR
ROGUE
GENIUS

Picasso

₹295
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On the Cover:

When Pablo Picasso was in his mid-20s, he created this self-portrait—and he and Georges Braque, his artistic soul mate, invented the art form known as cubism.

©2018 ESTATE OF PABLO PICASSO/ARTISTS RIGHTS SOCIETY (ARS), NEW YORK; ERICH LESSING, ART RESOURCE, NY

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THE BIG IDEA

Rid the Sciences of Sexual Harassers

They've lost their jobs in many fields—what about the sciences?
BY KATHRYN CLANCY

GENIUS

Mapping the Stars

Astrophysicist Juna Kollmeier wants to understand the substance of the universe.
BY RACHEL HARTIGAN SHEA



ALSO

- The Living Planet
- When the Too-Early Bird Sings

EXPLORE



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Arctic Camping in February

How to get to a place where winter travel is often impossible.
BY JON GOLDEN

DECODER

Termites' Tricks for Climate Control

An office building in tropical Zimbabwe keeps cool without air-conditioning.
BY MANUEL CANALES

ATLAS

Plotting Pluto

How cartographers mapped the dwarf planet's features.
BY MATTHEW W. CHWASTYK

ALSO

- Keeping the Books



FEATURES

Being Muslim in America

An estimated 3.45 million Muslims live in the United States today. Among them are immigrants from some 75 different countries. Despite a climate often hostile to their presence, they're forming communities, building mosques—and thriving.

BY LEILA FADEL
PHOTOGRAPHS BY
LYNSEY ADDARIO
.....P. 32

The Dinosaurs That Didn't Die

Survivors of an asteroid strike 66 million years ago begat today's birds.

BY VICTORIA JAGGARD
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Picasso, Genius

The restless brilliance behind his artistry continues to mesmerize us.

BY CLAUDIA KALB
PHOTOGRAPHS BY PAOLO
WOODS AND GABRIELE
GALIMBERTI.....P. 82

Shark Frenzy

At Fakarava Atoll in French Polynesia, each June brings a rare spectacle as groupers breed and sharks feed.
TEXT AND PHOTOGRAPHS
BY LAURENT BALLESTA
.....P. 110

NATIONAL GEOGRAPHIC MAGAZINE



PLANET OR PLASTIC?

18 billion pounds of plastic ends up in the ocean each year. And that's just the tip of the iceberg.

"Plastics aren't inherently bad. It's what we do, or don't do, with them that counts."

— SYLVIA EARLE
NATIONAL GEOGRAPHIC
EXPLORER-IN-RESIDENCE

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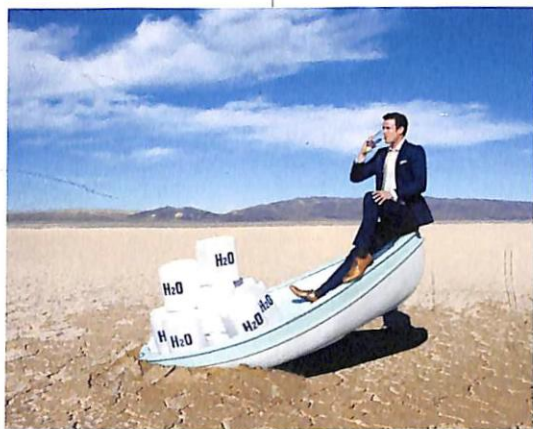
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On the Cover

A plastic shopping bag has a "working life" of about 15 minutes, and we're using a trillion of them a year. That's one highly visible source of plastic trash—but it's only the tip of the iceberg in an ocean saturated with plastics.

PHOTO ILLUSTRATION BY
JORGE GAMBOA

EMBARK



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THE BIG IDEA

To Conserve or Hog Resources

If society depended on it, would you share—or would you be selfish?

BY DYLAN SELTERMAN

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GENIUS

Trash to Treasure

Engineer Arthur Huang is finding new uses for garbage—and revolutionizing recycling in the process.

BY CHRISTINA NUNEZ



ALSO

Pollution on a Stick
Mushroom Cleaner
Glass Octopus

THROUGH THE LENS

A Chance Meeting

They were studying marine life—at closer range than planned.

BY DAVID DOUBILET
AND JENNIFER HAYES

DECODER

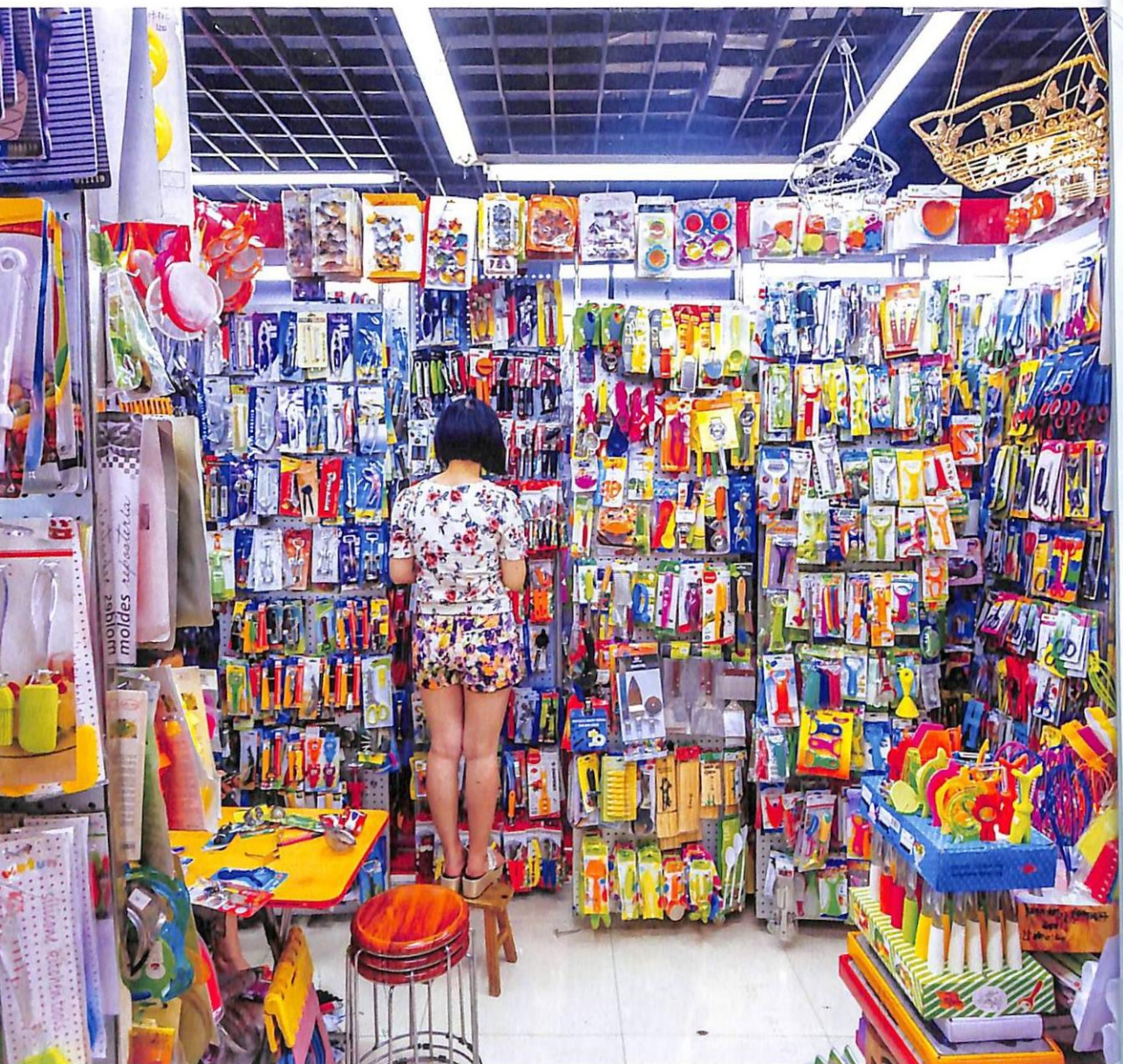
Talking Trees

In a Canadian forest fungi and trees have developed a hidden intelligence.

BY DAISY CHUNG AND
RYAN T. WILLIAMS

ALSO

Sex and the Queen
Pop Omnivore: Sampler of culture, history and media



FEATURES



Plastics

We make them. We depend on them. We're filling the ocean with them. Beyond what we've incinerated or recycled, a staggering 5.5 billion tons remain, taking centuries, or more, to break down. Can we enjoy this miracle material and have a clean environment too?

BY LAURA PARKER
PHOTOGRAPHS BY RANDY OLSON

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Humanlike Birds

Parrots may be too popular for their own good.

BY CHRISTINE DELL'AMORE
PHOTOGRAPHS BY JOEL SARTORE

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Lost Colony

What happened on Roanoke Island?

BY ANDREW LAWLER
PHOTOGRAPHS BY MARK THIESSEN

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NATIONAL GEOGRAPHIC MAGAZINE

*"I love the feeling
of pushing myself to
the edge and pushing
beyond what
I think is possible."*

KATIE LEDECKY
U.S. OLYMPIC
CHAMPION

BUILDING A BETTER ATHLETE

How science is testing
the limits of human speed,
strength, and endurance

DIVERSITY IN AMERICA:
LATINO POWER

RUSSIA'S RARELY SEEN
NATURE RESERVES

\$295

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On the Cover

Swimmer Katie Ledecky, a five-time Olympic gold medalist, is known for her tough work ethic, but she also relies on sports science to improve performance.

PHOTOS BY JOHN HUET

PROOF



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Wild Gems of Russia

Russia has imposed its strictest land-use protections on 85 million acres. That's more than any other country—and only the beginning of the story.

PHOTOGRAPHS BY SERGEY GORSHKOV

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30 Years of Climate Lessons

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