

Attaché

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DEPARTMENTS

- 2** Editor's note
- 3** Atmospheric Conditions
- 16** Intellectual Nourishment

FEATURES

- 38** **A Fragile Empire**
Australia's Great Barrier Reef.
Could it all come crumbling down?
By *Jennifer S. Holland*
Photograph by David Doubilet

- 46** **Population 7 Billion**
The global population is projected
to reach nine billion in 2045.
Can the planet take the strain?
By *Robert Kunzig*
Photographs by Randy Olson

- 104** **Moscow Never Sleeps**
When the sun sets,
the Russian capital heats up
By *Martin Cruz Smith*
Photograph by Gerd Ludwig

CONTENTS



Cover Photograph by Mark Wagoner
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Editor's Note

What is happening behind the curtain? When the lights went off and the people are gone. The applause ended, the fame is gone and the laughs disappeared. The actress was behind the curtain and realized that everything was temporary.

I still remember like it was yesterday, I was thirteen year old when my mom grabbed me from my ears and said to me “you have to stop playing around and listen to the pastor now”. This is my story. I was taught and prepared to serve God. I was the leader of the youth group, I acted out to entertain people and through the entertainment I gave them a message of love. Teacher, volunteer, designer, dancer and anything that they will ask me, I was willing to do it.

At the age of nineteen the person that once said, “yes, I will be in church” at that moment she was saying “I was never part of any church”.

I trusted the wrong people and trusted my own strength.

For the first time, I noticed who my real friends were. Through that experience, I came back to my birthplace; the place where I had left everything and that was the church. I called out to God saying, “I made a mistake, can you please forgive me?”.

I desperately asked God “tell me what to do to smile again!” and God with a lovely voice said to me “don’t worry about anything, all the things become new”. I was amazed and said “but I made a mistake, I disappointed you”. God repeated, “Forget about it, let’s start all over again, Geraldine”.

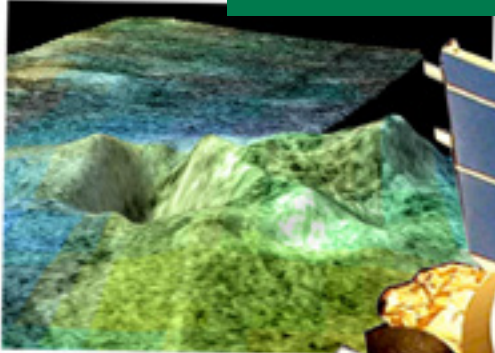
I felt like a new beginning started. The time started to fix and cure my heart until the pieces started to join. God restored, joined and fixed all. The actress that had fame and was loved by others doing what everyone else were doing, found herself lonely. She learned that was nothing more important than her family and God was willing to give her a second chance.



“ Everything is possible as long as you can believe ”



Cold Case: Possible Ice Volcano on Titan



Titan (or Saturn VI) is the largest moon of Saturn. NASA scientist Dr. Rosalyn Lopes has studied volcanoes on Earth, which spew hot, molten rock known as lava. Cryovolcanoes erupt with different materials. "These satellites have ice crusts," she says. "And under the ice crusts, there is a layer of water, or perhaps water with something else like ammonia, and if that liquid can come to the surface, that is what we call cryovolcanism. It just means cold volcanism."

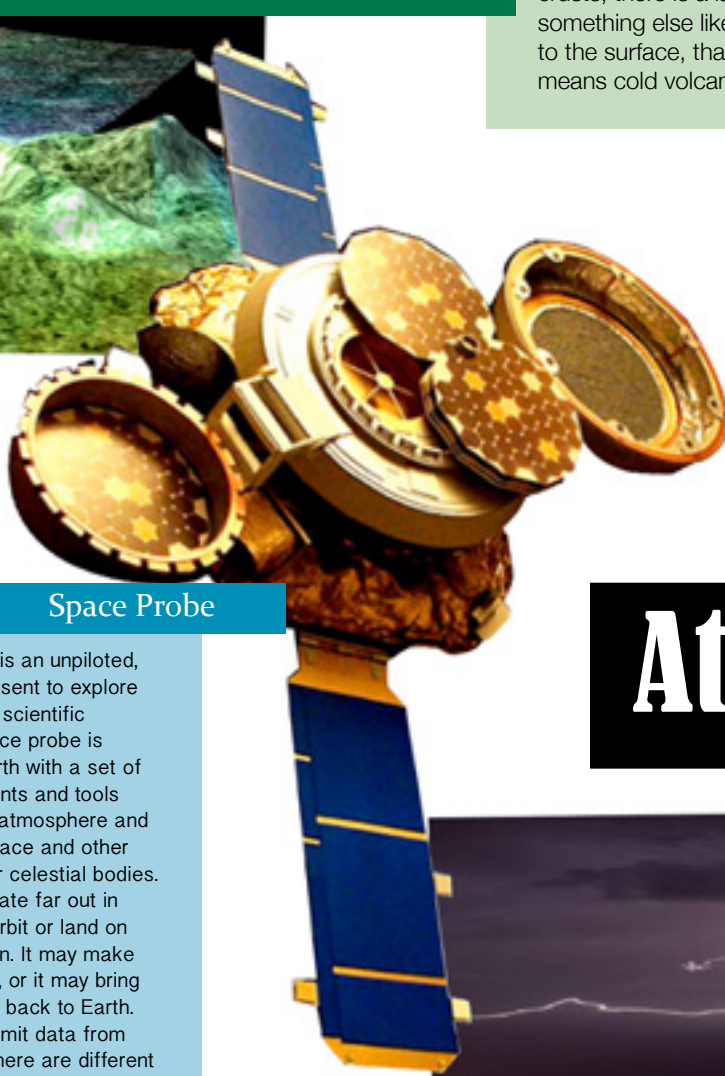
“

Everybody talks about the weather, but nobody does anything about it.”

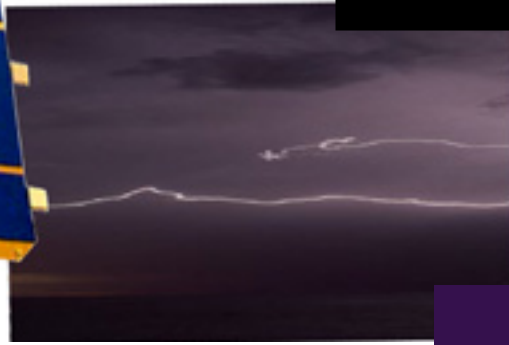
-MARK TWAIN

Space Probe

A space probe is an unpowered, unmanned device sent to explore space and gather scientific information. A space probe is launched from Earth with a set of scientific instruments and tools used to study the atmosphere and composition of space and other planets, moons, or celestial bodies. A probe may operate far out in space, or it may orbit or land on a planet or a moon. It may make a one-way journey, or it may bring samples and data back to Earth. Most probes transmit data from space by radio. There are different types of space probes because they collect different science information about very different environments. The probes must be able to withstand the various extreme environments to collect data. Humans have been sending space probes into space since the 1950s. The next generation of probes will study samples taken from comets, asteroids, and eventually Mars.



Atmospheric conditions



Lightning Can Strike Twice

Cloudy-to-ground lightning bolts are a common phenomenon—about 100 strike Earth's surface every single second—yet their power is extraordinary. Each bolt can contain up to one billion volts of electricity.

Some types of lightning, including the most common types, never leave the clouds but travel between differently charged areas within or between clouds. Other rare forms can be sparked by extreme forest fires, volcanic eruptions, and by snowstorms. Ball lightning, a small, charged sphere that floats, glows, and bounces along oblivious to the laws of gravity or physics, still puzzles scientists. Lightning is spectacular and it's dangerous. About 2,000 people are killed worldwide by lightning each year. Hundreds more survive strikes but suffer from a variety of lasting symptoms, including memory loss, dizziness, weakness, numbness, and other life-altering ailments.


A Fragile Empire

An underwater photograph of a coral reef. In the upper right, there is a large, brown, porous coral structure. In the lower right, two moray eels are visible. One eel is dark with orange spots and has its mouth open, showing its teeth. The other eel is lighter with orange spots. The water is a deep blue, and the sandy bottom is visible in the lower left.

From tiny coral polyps grew a marvel:
Australia's Great Barrier Reef.
Could it all come crumbling down?

By **Jennifer S. Holland**

Moray eels battle for a hiding spot in Challenger Bay, Australia.



Not far beneath the surface of the Coral Sea, where the Great Barrier Reef lives, parrotfish teeth grind against rock, crab claws snap as they battle over hiding spots, and a 600-pound grouper pulses its swim bladder to announce its presence with a muscular whump. Sharks and silver jacks flash by. Anemone arms flutter and tiny fish and shrimp seem to dance a jig as they guard their nooks. Anything that can't glom on to something rigid is tugged and tossed by each ocean swell.

“**TODAY NEW DISASTERS ENDANGER THE REEF,
AND THE PROSPECT FOR RECOVERY IS UNCERTAIN.
THE RELATIVELY QUICK SHIFT IN THE WORLD’S CLIMATE,
SCIENTISTS SAY, APPEARS TO BE
DEVASTATING FOR REEFS.**”

The reefs sheer diversity is part of what makes it great. It hosts 5,000 types of mollusks, 1,800 species of fish, 125 kinds of sharks, and innumerable miniature organisms. But the most riveting sight of all—and the main reason for World Heritage status—is the vast expanse of coral, from staghorn stalks and wave-smoothed plates to mitt-shaped boulders draped with nubby brown corals as leathery as saddles. Soft corals top hard ones, algae and sponges paint the rocks, and every crevice is a creature’s home. The biology, like the reef, transforms from the north—where the reef began—to the south. The shifting menagerie is unmatched in the world.

Time and tides and a planet in eternal flux brought the Great Barrier Reef into being millions of years ago, wore it down, and grew it back—over and over again. Now all the factors that let the reef grow are changing at a rate the Earth has never before experienced. This time the reef may degrade below a crucial threshold from which it cannot bounce back.

West Meets Reef

Europeans were introduced to the Great Barrier Reef by British explorer Capt. James Cook, who came upon it quite by accident. On a June evening in 1770, Cook heard the screech of wood against stone; he couldn’t have imagined that his ship had run into the most massive living structure on Earth: more than 10,000 square miles of coral ribbons and

isles waxing and waning for some 1,400 winding miles.

Cook’s team had been exploring the waters offshore of what is now Queensland when the H.M.S. Endeavour became trapped in the labyrinth. Not far beneath the surface, jagged towers of coral tore into the ship’s hull and held the vessel fast. As timbers splintered and the sea poured in, the crew arrived on deck “with countenances which sufficiently expressed the horrors of our situation,” Cook later wrote in his diary. Captain and crew were able to limp to a river mouth

to patch their vessel.

Aborigines had lived in the region for thousands of years before Europeans hit the rocks. Culturally, the reef has been a rich part of the landscape for Aboriginal and Torres Strait Islander peoples, who have canoed it and fished it and shared myths about its creatures for generations. But historians aren’t sure how deep their knowledge went of the reef’s geology and animal life. A few decades after Cook’s run-in with the behemoth beneath the sea, English cartographer Matthew Flinders—who also had a mishap



“Reefs for me are places for solitude and thought,” says Australian marine scientist Charlie Veron, here admiring a garden of stony corals on the northern Great Barrier Reef. “But I know there is fragility in their existence. I fear what lies ahead.”

www.daviddoubilet.com



An anemonefish peers out from among the toxic tentacles of its sea anemone home.

or two while “threading the needle” among the reefs—gave the entity its name, inspired by its size. All told, if the reef’s main chunks were plucked from the sea and laid out to dry, the rock could cover all of New Jersey, with coral to spare.

Expansion and Erosion

This mammoth reef owes its existence to organisms typically no bigger than a grain of rice. Coral polyps, the reef’s building blocks, are tiny colonial animals that house symbiotic algae in their cells. As those algae photosynthesize—using light to create energy—each polyp is fueled to secrete a “house” of calcium carbonate, or limestone. As one house tops another, the colony expands like a city; other marine life quickly grabs on and spreads, helping cement all the pieces together.

Off Australia’s eastern edge, conditions are ripe for this building of stone walls. Corals grow best in shallow, clear, turbulent water with lots of light to support photosynthesis.

Millions of polyp generations later, the reef stands not as a singular thing but as a jumble whose shapes, sizes, and life-forms are determined by where in the ocean they lie—how close to shore, for example—and what forces work on them, such as heavy waves. Go far enough from the coast, where the light is low and the waters are deeper, and there’s no reef at all.

“In the Great Barrier Reef, corals set the patterns of life from end to end,” says Charlie Veron, coral expert and a longtime chief scientist for the Australian Institute of Marine Science. With over 400 species in the region, “they structure the entire environment; they’re the habitat for everything else here.” The perfect temperature, clarity, and currents enable plate corals, for example, to increase in diameter up to a foot a year. The reef continuously erodes as well, worn down by waves, ocean

chemistry, and organisms that eat limestone. This vanishing act is far slower than the constant building up; still, as much as 90 percent of the rock eventually dissipates into the waters, forming sand. So the living veneer of this reef, the part a diver sees, is ever changing.

And the layers beneath are relatively young, geologically speaking, at less than 10,000 years. The reef’s true beginnings go back much further. Closer to 25 million years ago, Veron says, as Queensland edged into tropical waters with the movement of the Indo-Australian tectonic plate, coral larvae began riding south-flowing currents from the Indo-Pacific, grabbing footholds wherever they could. Slowly, rocky colonies grew and spread along the seafloor flush with diverse marine life. A human visitor to the reef can see the fish doing their vital job.




A Rocky Course

Since the reef first found footing, ice ages have come and gone, tectonic plates have crept forward, and ocean and atmospheric conditions have fluctuated wildly. The reef has seen many iterations—expanding and eroding, being defaced and reinhabited at nature's whim.

A history of the Great Barrier Reef,"Veron says, "is a catalog of disasters" caused by planetary chaos. But they are disasters from which the reef has always recovered. Today new disasters endanger the reef, and the prospect for recovery is uncertain. The relatively quick shift in the world's climate, scientists say, appears to be devastating for reefs.

In corals, warming temperatures and increased exposure to the sun's ultraviolet rays lead to a stress response called bleaching—when the colorful algae in coral cells become toxic and are expelled, turning the host animals skeletal white. Fleishy seaweeds may then choke out the remains.

Major bleaching in the Great Barrier Reef and elsewhere in 1997-98 was linked to a severe El Niño year and record-high sea-surface temperatures—in some spots 3°F higher than normal. Another round began in 2001 and again in 2005. By 2030, some reef experts say, these destructive episodes will occur every year. Heat is also implicated in a 60-year decline in ocean phytoplankton—the microscopic organisms that not only gobble greenhouse gases



Rhythmic currents in Challenger Bay push and pull a school of diagonal-banded sweetlips. Members of the grunt family, these fleshy-lipped fish feed at night, plucking invertebrates from the sandy sea bottom. *Plectorhinchus lineatus*

but also feed, directly or indirectly, almost every other living thing in the sea. Reef fish, too, respond to warmer waters—sometimes with bolder, more aggressive behavior toward both predators and prey. Changes in sea level, either up or down, have a dire impact as well, exposing shallow corals to too much sun or drowning them in deeper water, where they're hidden from the light.

A more immediate concern is massive flooding in Australia that earlier this year sent huge plumes of sediment and toxin-laden waters onto the reef off Queensland. The full harm to marine life won't be clear for years, but long stretches of the Great Barrier Reef could experience disastrous die-offs. And then there's the acid test.

Reef ecosystems worldwide took a pounding during each of Earth's five mass extinctions, the first about 440 million years ago. Greenhouse gases spiked naturally over the millennia, and Aussie biologist Veron says massive spewing of carbon dioxide during periods of heavy volcanic activity was likely a big player in coral decimation, notably the most recent mass extinction some 65 million years ago. At that time, oceans absorbed more and more of those greenhouse gases from the atmosphere, causing ocean acidity to rise. The lower pH—a sign of high levels of acidity—ultimately thwarted the ability of marine creatures to build their limestone shells and skeletons.

In some oceans this acidification is once again happening. The most vulnerable to acid's corrosive bite are the fast-growing branching corals and vital calcium-excreting algae that help bind the reef. The more brittle the reef's bones, the more wave action, storms, diseases, pollutants, and other stresses can break them.

In ancient times many corals adapted to changing ocean acidity, says Veron, who paints a particularly bleak picture of the Barrier Reef's future. "The difference is there were long stretches in between; corals had millions of years to work it out." He fears that with unprecedented CO₂, sulfur, and nitrogen emissions by human industry, added to the increasing escape of methane as a result of Earth's melting ice, much of the reef will be nearly bereft of life within 50 years. What will be left? "Coral skeletons bathed in algal slime," he says.

Edging Forward

Of course, to the two million tourists who visit the reef each year, the promise of an underwater paradise teeming with life is still fulfilled. But the blemishes are there if you know where to look. The reef bears a two-mile-long scar from a collision with a Chinese coal carrier in April of last year. Other ship groundings and occasional oil spills have marred the habitat. Sediment plumes from flooding and nutrients from agriculture and development also do very real damage to the ecosystem. But Aussies aren't inclined to let the reef fall apart without a national outcry. The captain of the boat who took me diving put it this way: "Without the reef, there's nothing out here but a whole lot of salty water." To many locals, he adds, "the reef is a loved one whose loss is too sad to contemplate." And it is also crucial economically: The visitors he motors to the reef's edges provide more than one billion dollars annually for Australia's books.

The challenge scientists face is to keep the reef healthy despite rapid change. "To fix a car engine, you need to know how it works," says marine biologist Terry Hughes of James Cook University. "The same is true for reefs." He and others have been investigating how these ecosystems function so that efforts to prevent damage can be doubly effective.

High on the to-do list: Determine the full impact of overfishing. Traditionally, commercial fishermen could work along the reef, even after 133,000 square miles of ocean habitat was designated a marine park in 1975. But with rising concern about the big take, the Australian government in 2004 made a third of that area, in strategically placed zones, off-limits to all fishing—including for sport. The biological recovery has been bigger and faster than expected; within two years after the ban, for example, numbers of coral trout doubled on once heavily fished reef. Some scientists speculate that protective zones may also lead to declines in outbreaks of a devastating coral-eating sea star.

Scientists also want to know what makes specific corals extra tenacious during times of change. "We know some reefs experience much more stressful conditions than others," says reef ecologist Peter Mumby of the University of Queensland. "Looking at decades of sea temperature data, we can now map where corals are most acclimated to warmth."

Population 7 Billion

There will soon be seven billion people on the planet.
By 2045 global population is projected to reach nine billion.
Can the planet take the strain?

By **ROBERT KUNZING**
Photographs by Randy Olson

United States

Bundled newborns on September 1, 2010, are arranged for a portrait at Orlando's Winnie Palmer Hospital, the second busiest birth facility in the U.S. Unusual among industrial nations, the U.S. has a comparatively high fertility rate, due in part to the significant rate of teenage pregnancies and a steady influx of immigrants. By 2050 America's population is expected to top 400 million.



England

Glowing furnace bright at night, London became the world's largest city during the coal-powered industrial revolution, a tipping point for the steep rise of Earth's population. Wealthy countries use many times more resources per capita than poorer nations, but as global incomes rise, increased consumption may stress the planet more than population growth.



Spain

Immigrants like these Indians at a Sikh festival in Barcelona are bolstering Europe's stagnant population growth rate. Around the world, the childbearing decisions of young women will determine whether global population stabilizes or not. Research shows that the more education a woman receives, the fewer children she is likely to have.



Before the 20th century, no human had lived through a doubling of the human population, but there are people alive today who have seen it triple. Sometime in late 2011, according to the UN Population Division, there will be seven billion of us.

Japan

A talking robot helps 69-year-old Nabeshima Akiko shop in a test conducted by researchers from Keihanna Science City near Kyoto. Making up 23 percent of the population, the 29 million elderly in Japan far outnumber the young, an unprecedented situation that raises concerns about who—or what—will support the old in the years ahead.



Russia

Traffic is light—a horse cart with grain, a puppy in pursuit—on a road passing an abandoned granary and church in Novotishchevo, one of thousands of Russian villages depopulating as people move to cities and have fewer kids. To combat a low birthrate, the government has promised to pay \$11,500 to women who have a second child.



China

Using every fertile inch, farmers harvest rice in the hills of Yunnan Province. High-yield seeds and ample fertilizer allow China to feed its billion-plus people on less than 10 percent of the Earth's arable land. Producing enough food as global population grows is possible, but doing so without exhausting finite resources, especially water, will be a challenge.



**“How
many
people
can the
Earth
support?”**





Kenya

In a Nairobi slum Mary Wanza, a single mother earning three dollars a day, makes porridge for ten children, some hers, others grandkids and orphans. Wanza, 41, gave birth to the first of seven at age 15. Fertility rates remain high in sub-Saharan Africa; Kenya's rate fell from eight to five births per woman between 1960 and 2000 but has since declined only to 4.6. The global average is 2.5.

And the explosion, though it is slowing, is far from over. Not only are people living longer, but so many women across the world are now in their childbearing years—1.8 billion—that the global population will keep growing for another few decades at least, even though each woman is having fewer children than she would have had a generation ago. By 2050 the total number could reach 10.5 billion, or it could stop at eight billion—the difference is about one child per woman. UN demographers consider the middle road their best estimate: They now project that the population may reach nine billion before 2050—in 2045. The eventual tally will depend on the choices individual couples make when they engage in that most intimate of human acts, the one Leeuwenhoek interrupted so carelessly for the sake of science.

With the population still growing by about 80 million each year, it's hard not to be alarmed. Right now on Earth, water tables are falling, soil is eroding, glaciers are melting, and fish stocks are vanishing. Close to a billion people go hungry each day. Decades from now, there will likely be two billion more mouths to feed, mostly in poor countries. There will be billions more people wanting and deserving to boost themselves out of poverty. If they follow the path blazed by wealthy countries—clearing forests, burning coal and oil, freely scattering fertilizers and pesticides—they too will be stepping hard on the planet's natural resources. How exactly is this going to work?

THERE MAY BE SOME COMFORT in knowing that people have long been alarmed about population. From the beginning, says French demographer Hervé Le Bras, demography has been steeped in talk of the apocalypse.

India

It's steaming streets crammed with vendors, pedestrians, and iconic Ambassador taxis, Kolkata throbs with some 16 million people—and more pour in every day from small towns. In 1975 only three cities worldwide topped ten million. Today 21 such mega cities exist, most in developing countries, where urban areas absorb much of the globe's rising population.



Some of the field's founding papers were written just a few years after Leeuwenhoek's discovery by Sir William Petty, a founder of the Royal Society. He estimated that world population would double six times by the Last Judgment, which was expected in about 2,000 years. At that point it would exceed 20 billion people—more, Petty thought, than the planet could feed. "And then, according to the prediction of the Scriptures, there must be wars, and great slaughter," he wrote.

As it turned out, the last plagues great enough to put a dent in global population had already happened when Malthus wrote. World population hasn't fallen, historians think, since the Black Death of the 14th century.

In the two centuries after Malthus declared that population couldn't continue to soar, that's exactly what it did. The process started in what we now call the developed countries, which were then still developing. The spread of New World crops like corn and the potato, along with the discovery of chemical fertilizers, helped banish star-

vation in Europe. Growing cities remained cesspools of disease at first, but from the mid-19th century on, sewers began to channel human waste away from drinking water, which was then filtered and chlorinated; that dramatically reduced the spread of cholera and typhus.

“

See to it that all children are nourished well enough to learn in school and are educated well enough to solve the problem”

Moreover in 1798, the same year that Malthus published his dyspeptic tract, his compatriot Edward Jenner described a vaccine for smallpox—the first and most important in a series of vaccines and antibiotics that, along with better nutrition and sanitation, would double life expectancy in the industrializing countries, from 35 years to 77 today. It would take a cranky person to see that trend as gloomy: "The development of medical science was the





straw that broke the camel's back," wrote Stanford population biologist Paul Ehrlich in 1968.

Ehrlich's book, *The Population Bomb*, made him the most famous of modern Malthusians. In the 1970s, Ehrlich predicted, "hundreds of millions of people are going to starve to death," and it was too late to do anything about it. "The cancer of population growth... must be cut out," Ehrlich wrote, "by compulsion if voluntary methods fail." The very future of the United States was at risk. In spite or perhaps because of such language, the book was a best seller, as Malthus's had been. And this time too the bomb proved a dud. The green revolution—a combination of high-yield seeds, irrigation, pesticides, and fertilizers that enabled grain production to double—was already under way. Today many people are undernourished, but mass starvation is rare. Ehrlich was right, though, that population would surge as medical science spared many lives. After World War II the developing countries got a sudden transfusion of preventive care, with the help of institutions like the World Health Organization and UNICEF.

Penicillin, the smallpox vaccine, DDT (which, though later controversial, saved millions from dying of malaria)—all arrived at once. In India life expectancy went from 38 years in 1952 to 64 today; in China, from 41 to 73. Millions of people in developing countries who would have died in childhood survived to have children themselves. That's why the population explosion spread around the planet: because a great many people were saved from dying.

And because, for a time, women kept giving birth at a high rate. In 18th-century Europe or early 20th-century Asia, when the average woman had six children, she was doing what it took to replace herself and her mate, because most of those children never reached adulthood. When child mortality declines, couples eventually have fewer children—but that transition usually takes a generation at the very least. Today in developed countries, an average of 2.1 births per woman would maintain a steady population; in the developing world, "replacement fertility" is somewhat higher. In the time it takes for the birth-rate to settle into that new balance with the death rate.



Russia

A nurse at the Centre for Family Planning and Reproduction in Moscow holds up a newborn for excited family members waiting outside. The government is thrilled by births as well. Russia's population keeps falling and is now 142 million, down from its peak of 148 million in the 1990s. In the 1990s.

Intellectual Nourishment

“One of the very nicest things about life is the way we must regularly stop whatever it is we are doing and devote our attention to eating.”

—**Luciano Pavarotti**



Nathan's Famous Hot Dog Eating Contest

Nathan's Famous Hot Dog Eating Contest, which takes place every Fourth of July on Brooklyn's Coney Island boardwalk, has long been an Independence Day tradition in the United States. In this yearly gastronomical showdown, qualified contestants have ten minutes to eat as many Nathan's Famous hot dogs (and buns) as they can. Five-time defending champion Joey Chestnut repeated for a sixth championship in 2012, matching the world record he set in 2009 of 68 hot dogs in ten minutes. That's more than one whole hot dog every ten seconds. Hot dog visionary Nathan Handwerker was born in Poland on July 14, 1882 to Jewish parents. He emigrated to New York City in 1912, where he began working in the kitchen of Feltman's restaurant in Coney Island. Ambitious for a slice of American success, he opened his own hot dog stand which he would later title Nathan's Famous in 1916. Legend has it that the first ever hot dog eating contest took place on July 4, 1916 between four immigrants arguing over who was the most patriotic. James Mullen, an Irish immigrant, won by eating 13 hot dogs in 12 minutes and the Fourth of July tradition was born. What better way could there be to celebrate the Fourth of July?

Southerners really do eat fried green tomatoes!

If you haven't tried them, you're in for a treat! Native to Mexico and Central America, it's not clear how tomatoes came to the United States. Thomas Jefferson grew them in the 1780s and credited one of his neighbors with the introduction, but Harriott Pinckney Horry recorded a recipe "To Keep Tomatoes For Winter Use" in 1770. There is a folk legend that they were introduced by African slaves who came to North America by way of the Caribbean, and some historians believe that the Portugese introduced tomatoes to the West Coast of Africa.



SO, YOU WANT TO BE A SPICE TRADER

By Zachary Michel

Al Goetze, Chief Spice Buyer, McCormick & Company Inc., grew up in Maryland, near the Atlantic coast. He spent much of his childhood fishing and crabbing with his family on the Chesapeake Bay. "I was always fascinated [with the outdoors]. I loved to fish, and in order to know where the crabs were, I had to understand all the little creeks and coves and all the depths and . . . tidal movements," he explains. Today, Al works for McCormick & Company, the largest spice company in the world. In order to locate and purchase the most fragrant spices, Al frequently travels to learn the conditions of the market and the farms, and to ensure the quality of the spices. Many spices are grown and harvested in tropical climates, and Al has visited such diverse farming areas as Madagascar, Indonesia, China, and the Middle East. Al also enjoys the adventure of native cuisine. "I really enjoy the culture of the foods. I'm always experimenting. I can remember my early trips to China, we'd go to huge meals with 12 people around the table," he says. "There'd be dishes on top of dishes . . . I didn't recognize a single thing on the table . . . and no one was going eat a thing until I tested everything." "Everything" included foods such as camel hooves, cobra blood, and fried scorpions.

MOSCOW NEVER SLEEPS

WHEN THE SUN SETS, THE RUSSIAN CAPITAL HEATS UP



Artist German Vinogradov wields a blowtorch to season the look of his latest landscape. Active in the cultural underground during Soviet times, Vinogradov says, "Nothing is taboo now."

Novelist Martin Cruz Smith and photographer Gerd Ludwig discover the sinister magic of a city that reveals its true colors at night.

*By Martin Cruz Smith
Photograph by Gerd Ludwig*

At midnight the city is a brilliant grid of light that includes the gilded dome of the Cathedral of Christ the Savior, the Stalinist horror of the Ukraine Hotel, and a dark loop of the Moscow River. Downstream the lights of round-the-clock construction hang in the air while steel and concrete disappear. The clutter of the day is gone. The night brings clarity, and lights trace the future.



In the opulent Turandot restaurant, Mozart is merely background to conspicuous consumption that has fueled Moscow's abrupt ascent to the ranks of the world's most expensive cities.

On Sparrow Hills, however, all eyes were on an unsanctioned rally of motorcycles: Japanese bikes as bright as toys, dour Russian Vostoks, "monster" Ducatis, Harleys with exhaust pipes of polished chrome. Hundreds of bikers and admirers filled the vista terrace to see machines that posed on their stands in the negligent fashion of movie stars. A Harley merely had to clear its throat to thrill the crowd.

Some bikes were so customized it was difficult to determine what they started as. A Ural that usually hauled sacks of potatoes in its sidecar had been transformed into a stealth-black predator bristling with rockets and machine guns. As the machine-gun barrels were chair legs and the handlebars were crutches, the effect was more theatrical than threatening. Despite the display of leather and studs, the same could be said of the bikers. I asked an ogre with a shaved head and bandanna what his day job was. To which his girlfriend added, Fievel's a computer programmer. Geek by day, bandit by night."

My friend Sasha was along. Sasha is so soft-spoken he seems shy, when in fact he is a homicide detective who weighs his words. In the army he competed in biathlons, the sport of racing on skis with a rifle and then stopping to shoot at a target as his heart pounded against his ribs. He still has that calm.

"Moscow at night is a fairy tale with menace. A Cinderella who doesn't leave the Kremlin by midnight could lose more than a glass slipper"

We first met years ago in an Irish bar in Moscow. My highly intelligent colleague Lyuba and I were celebrating the end of two weeks of on-the-ground research and interviews for one of my novels. Sasha had just dragged some dead mafia from a swamp and was in no mood for fictional heroes. Now that he is married to Lyuba, he is forced to endure my constant questions, although he gripes that my Investigator Renko should be a regular detective like him.



A shopper scythes through bitter cold to reach a boutique on Red Square. These materialistic days, Marx and Lenin can't compete with Dior and Armani for the hearts of Moscow's consuming class.

Racing began across the boulevard. Competitors were a blur between spectators, the smaller bikes accelerating with a whine while the heavyweights produced a roar that made the ground tremble. The finish line was negotiable, anywhere from a hundred meters to a circuit of the Garden Ring, the peripheral road around the center of Moscow, where bikes could reach 120 miles an hour, depending on traffic. Car races also took place, or did until the crackdown after YouTube featured videos of drivers weaving in and out of Ring traffic at three times the speed limit.

A biker in a padded leather outfit—more a belief system than actual protection—mounted a Kawasaki, maybe 750cc. What did I know? I once rode a Vespa scooter from Rome to the south of Spain; that's the extent of my expertise, and I worried when a teenage girl wearing little more than a helmet hopped on behind. As soon as she had a grip, they glided toward the race lanes. The girl looked so frail I had to ask,

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WHO IS IN CHARGE Vladimir Putin? His successor, Dmitry Medvedev? The legendary oligarchs? The KGB disguised as a kinder FSB? (There does seem to be an active or former secret agent on the board of every major company.) Well, as they say in Russia, "Those who know, know."



Strangers in a “flash mob” cued via the Internet show up to kiss amid the crowds near Red Square. From here they’ll scatter into the night, reveling in the anything-can-happen world of Moscow after dark.

What is certain is that Moscow is afloat in petrodollars. There are more billionaires in Moscow than in any other city in the world. More than New York, London, or Dubai. Millionaires are as common as pigeons. Together the rich and mega-rich constitute a social class who were loosely called New Russians when they first appeared in the 1990s. Half of them are survivors of industrial shake-ups like the “aluminum war” of ten years ago, when executives were killed left and right. Half have discovered that starting a bank is more profitable than robbing one. Half are young financial trapeze artists swinging from one hedge fund to another. (You can have three halves in Russia.)

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But what a change. When I first visited Moscow in 1973, the entire population of the city seemed to retire to a crypt as soon as the sun went down. The few cars on the street were small, dyspeptic Zhigulis. A shop window display might be a single dried fish. Red Square was empty except for the honor guard at Lenin’s Tomb, and billboards featured the stony visage of General Secretary Brezhnev. Banners declared, “The Communist Party Is the Vanguard of the Working Class!” That was the world that today’s New Russians grew up in, and it is no wonder that their repressed energy and frustration have erupted with a passion.

Russians are over the top. They’re not “old money” hiding behind ivy-covered walls. In fact, they often refuse old money. It’s new money, crisp American \$100 bills flown in daily and spent almost as fast. Think about it. A billion dollars is a thousand million dollars. How do you cele-

brate success on such a scale? How much caviar can you eat? How much bubbly can you drink? That’s why clubs were invented. Clubs give the rich the chance to “flaunt it, baby, flaunt it,” assured that “face control” will stop undesirables at the door. Face control is executed by men who in a glance can determine your financial profile and celebrity status. And whether you are carrying a gun. The first sign that the GQ Bar was hot was the number of Bentleys and Lamborghinis lined up at the curb. I was visiting with writer Lana Kapriznaya and journalist Yegor Tolstyakov. Lana is dark haired, petite, about a hundred pounds, including cigarette smoke.

She is an acerbic chronicler of the follies of New Russians. Yegor has a voice meant for a dirge, but see him, and he’s smiling

New arrivals were greeted by women who were beautiful on a surreal level. Big air kiss. Big air kiss. The GQ Bar is licensed by the magazine publisher Condé Nast International, which provides a steady supply of models who sip water at \$20 a bottle and pick at Kamchatka crab, a giant crustacean served with six sauces. The interior design is out of Somerset Maugham, all dark woods and lazy ceiling fans. Not hungry? Nyet problem. GQ’s VIP lounge is a watering hole for lions only. Here a man can sip Johnnie Walker Blue, light a Cuban cigar, sip a brandy, unwind, and make more money. New Russians are social animals; they squeeze business and pleasure together the way Russian drivers squeeze five lanes out of four. The office is full of petty distractions: meetings, phone calls, endless details.