

# Awake!

MAY 22, 2003

When  
Insects  
Spread  
**DISEASE**





## When Insects Spread DISEASE 3-12

Illnesses acquired through insects are increasing at an alarming rate. Why? What can you do to protect yourself and your family? Is there a long-term solution?



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Come on a fascinating journey over this unique "highway," and see some of the most beautiful scenery in Norway.

TO-FOTO AS, Harstad

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# INSECT-BORNE DISEASE

## A Growing Problem

**IT IS BEDTIME** in a Latin-American home. A mother lovingly tucks her young son in and bids him good night. But in the dark a sleek, black kissing bug, less than an inch long, slips out of a crevice in the ceiling over the bed. It drops undetected onto the sleeping child's face and almost imperceptibly pierces the soft skin with its beak. As the bug gorges itself on blood, it also discharges its parasite-laden waste. Without waking, the boy scratches his face, rubbing the infected feces into the wound.

As a result of this one encounter, the child contracts Chagas' disease. Within a week or two, he gets a high fever and his body swells. If he survives, the parasites may take up residence in his system, invading his heart, nerves, and internal tissues. As many as 10 to 20 years may pass without symptoms. But then he may develop lesions in his digestive tract, experience cerebral infection, and ultimately die of heart failure.

This fictionalized account realistically depicts how Chagas' disease can be contracted. In Latin America, millions may be at risk of receiving this kiss of death.

The kissing bug



### Man's Multilegged Companions

"Most of the major fevers of man are produced by micro-organisms that are conveyed by insects," states the *Encyclopædia Britannica*. People commonly use the term "insect" to include not only true insects—six-legged creatures such as flies, fleas, mosquitoes, lice, and beetles—but

### Today 1 person in 6 is infected with an insect-borne disease

also eight-legged creatures such as mites and ticks. Scientists list all of these under the larger category of arthropod—the largest division in the animal kingdom—which includes at least a million known species.

The vast majority of insects are harmless to man, and some are very beneficial. Without them, many of the plants and trees that people and animals depend on for food would not be pollinated or bear fruit. Some insects help to recycle waste. Many insects feed exclusively on plants, while certain ones eat other insects.

Of course, there are insects that annoy man and beast with their painful bite or simply by their presence in vast numbers. Some also wreak havoc on crops. Worse, however, are insects that spread sickness and death. Insect-borne diseases "were responsible for more human disease and death in the 17th through the early

20th centuries than all other causes combined," states Duane Gubler of the U.S. Centers for Disease Control and Prevention.

Presently, about 1 out of every 6 people is infected with a disease acquired through insects. Besides causing human suffering, insect-borne disease imposes a heavy financial burden, especially on developing countries—those that can least afford it. Even a single outbreak can be costly. One such incident in western India in 1994 is said to have drained billions of dollars from the local and world economies. According to the World Health Organization (WHO), the world's poorest countries will be unable to advance economically until such health problems are brought under control.

### How Insects Make Us Sick

There are two main ways that insects serve as vectors—transmitters of disease. The first is by mechanical transmission. Just as people can track dirt into a home on unclean shoes, "houseflies may carry on their feet millions of microorganisms that, in large enough doses, can cause disease," says the *Encyclopædia Britannica*. Flies can pick up contamination from feces, for example, and pass it on when they land on our food or drink. In this way humans contract such debilitating and deadly illnesses as typhoid, dysentery, and even cholera. Flies also help to spread trachoma—the leading

*Houseflies carry disease-causing agents on their feet*



cause of blindness in the world. Trachoma can blind by scarring the cornea—the clear part of the eye in front of the iris. Worldwide, some 500,000,000 humans suffer from this scourge.

Cockroaches, which thrive in filth, are also suspected of mechanically transmitting disease. In addition, experts link a recent steep rise in asthma, especially among children, to cockroach allergies. For instance, picture Ashley, a 15-year-old girl who has spent many nights struggling to breathe because of her asthma.

As her doctor is about to listen to her lungs, a cockroach falls out of Ashley's shirt and runs across the examination table.

### Diseases on the Inside

When insects harbor viruses, bacteria, or parasites inside their bodies, they can spread disease a second way—by passing it on through a bite or other means. Only a small percentage of insects transmit disease to humans in this way. For instance, although there are thousands of species of mosquitoes, only those of the genus *Anopheles* transmit malaria—the world's second-deadliest communicable disease (after tuberculosis).

Still, other mosquitoes transmit a host of different maladies. WHO reports: "Of all disease-transmitting insects, the mosquito is the greatest menace, spreading malaria,



▲ Clemson University - USDA Cooperative Extension Slide Series, [www.insectimages.org](http://www.insectimages.org)

## Awake!®

**THIS JOURNAL IS PUBLISHED** for the enlightenment of the entire family. It shows how to cope with today's problems. It reports the news, tells about people in many lands, examines religion and science. But it does more. It probes beneath the surface and points to the real meaning behind current events, yet it always stays politically neutral and does not exalt one race above another. Most important, this magazine builds confidence in the Creator's promise of a peaceful and secure new world that is about to replace the present wicked, lawless system of things.

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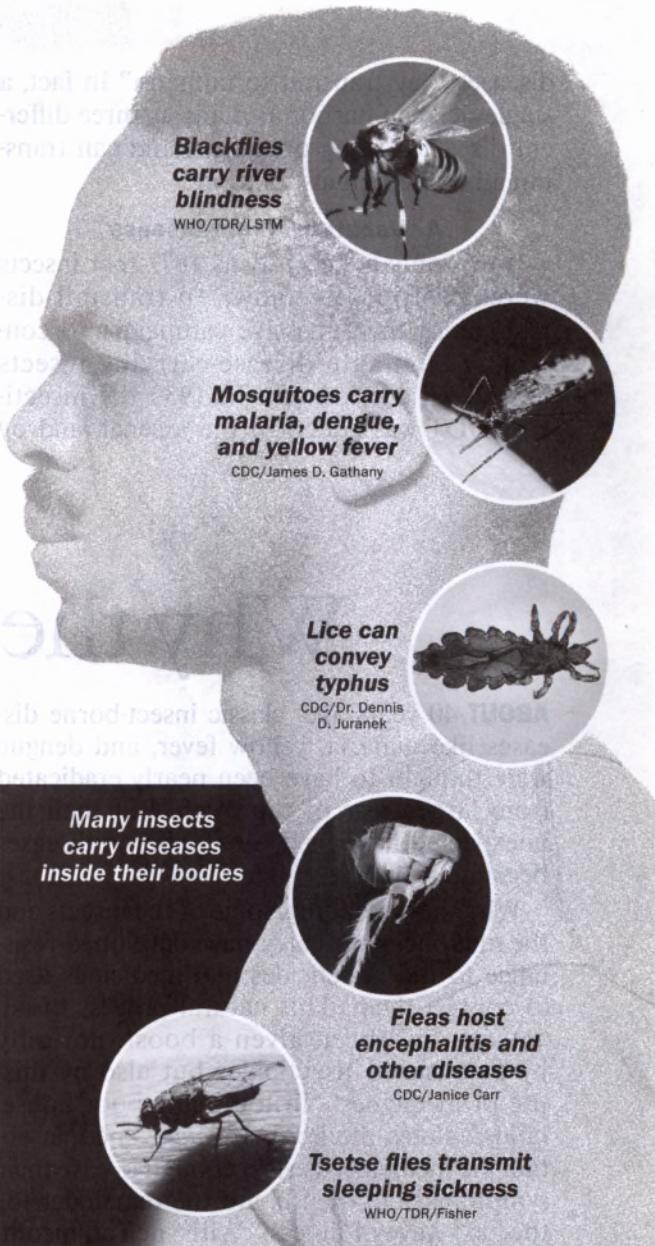
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dengue and yellow fever, which together are responsible for several million deaths and hundreds of millions of cases every year." At least 40 percent of earth's population are at risk for malaria, and about 40 percent for dengue. In many places, a person can contract both.

Of course, mosquitoes are not the only insects that carry disease inside them. Tsetse flies transmit the protozoa that cause sleeping sickness, afflicting hundreds of thousands of people and forcing whole communities to abandon their fertile fields. By transmitting the organism causing river blindness, blackflies have robbed some 400,000 Africans of sight. Sand flies can carry the protozoa that cause leishmaniasis, a group of disabling, disfiguring, and often fatal diseases that presently afflict millions of people of all ages around the world. The ubiquitous flea can host tapeworms, encephalitis, tularemia, and even plague—generally associated with the Black Death, which in just six years wiped out a third or more of the European population during the Middle Ages.

Lice, mites, and ticks can convey various forms of typhus, besides other diseases. Ticks in temperate lands around the world can carry potentially debilitating Lyme disease—the most common vector-borne illness in the United States and Europe. A Swedish study revealed that migratory birds can transport ticks thousands of miles, possibly introducing the diseases they carry to new regions. "Ticks," says the *Britannica*, "surpass all other arthropods (except mosquitoes) in the number of



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diseases they transmit to humans." In fact, a single tick can harbor as many as three different disease-causing organisms and can transmit all of them in just one bite!

### A "Vacation" From Disease

It was only as recently as 1877 that insects were scientifically shown to transmit disease. Since then, massive campaigns to control or eliminate disease-carrying insects have been carried out. In 1939 the insecticide DDT was added to the arsenal, and by

the 1960's insect-borne disease was no longer regarded as a major threat to public health outside Africa. Emphasis shifted away from controlling the vectors to treating emergency cases with drugs, and interest in studying insects and their habitats waned. New medicines were also being discovered, and it seemed that science could find a "magic bullet" to deal with any illness. The world was enjoying a "vacation" from infectious disease. But the vacation was to end. The following article will discuss why.

# Why the RESURGENCE?

**ABOUT** 40 years ago, classic insect-borne diseases like malaria, yellow fever, and dengue were thought to have been nearly eradicated from large areas of the earth. But then the unexpected happened—Insect-borne diseases began to reemerge.

Why? For one thing, some of the insects and the microbes they carry have developed resistance to the insecticides and medicines used to control them. This natural process of adaptation has been given a boost, not only by overuse of insecticides but also by misuse of medicines. "In too many poor households," states the book *Mosquito*, "people obtain the medicine, use just enough to ease their symptoms, and then hoard the remainder for the next wave of illness." With such an incomplete cure, the stronger microbes may survive in a person's body to produce a new generation of drug-resistant offspring.

### A Change in the Climate

An important factor in the resurgence of insect-borne diseases is change—in nature and in society. A case in point is global climate change. Some scientists expect a warming global environment to expand the range of

disease-carrying insects into presently cooler climates. There is some evidence that this may already be taking place. Dr. Paul R. Epstein of the Center for Health and the Global Environment, Harvard Medical School, notes: "Both insects and insect-borne diseases (including malaria and dengue fever) are today being reported at higher elevations in Africa, Asia, and Latin America." In Costa Rica, dengue has spilled over the mountains, which until recently confined the disease to the Pacific Coast, and it now blankets the entire country.

But warmer weather can do more. In some areas it transforms rivers into puddles, while in others it triggers rains and floods that leave behind stagnant pools. In both cases the standing water serves as a perfect breeding ground for mosquitoes. Hotter weather also shortens the mosquitoes' breeding cycle, speeding up their reproduction rate, and it lengthens the season during which mosquitoes abound. In warmer weather, mosquitoes are more active. Hotter temperatures even reach inside the mosquito's gut and intensify the reproduction rate of disease-causing microbes, thereby increasing the likelihood that

# West Nile Virus Invades the United States

West Nile virus, transmitted to man primarily by mosquitoes, was first isolated in 1937 in Uganda and later observed in the Middle East, Asia, Oceania, and Europe. The virus was not detected in the Western Hemisphere until 1999.



CDC/James D. Gathany

Since then, however, more than 3,000 infections have been reported in the United States and more than 200 individuals have died.

Most infected people are never aware of the infection, although some may develop flulike symptoms. But a small percentage develop serious illness, including encephalitis

and spinal meningitis. There is as yet no preventive vaccine or specific treatment available for West Nile virus. The U.S. Centers for Disease Control and Prevention warns that West Nile virus may also be acquired through organ transplants or a blood transfusion from an infected donor. "There currently is no way to screen blood for the West Nile virus," reported Reuters news service in 2002.

a single bite will cause infection. Yet, there are other concerns.

## A Case Study in Disease

Changes in human society can also contribute to insect-borne disease. To understand how, we need to take a closer look at the role of insects. In many diseases an insect may be only one of several links in the chain of disease transmission. An animal or a bird can serve as a host for a disease by carrying insects on its body or by harboring microorganisms in its bloodstream. If the hosts can survive this way, they may also become a reservoir of the disease.

Consider Lyme disease, identified in 1975 and named for Lyme, Connecticut, U.S.A., where it was first observed. The bacterium that causes Lyme disease may have come to North America a hundred years ago with rats or livestock on ships from Europe. After a tiny *Ixodes* tick ingests the blood of an infected animal, the bacteria remain in the tick's gut for the rest of its life. When the tick later bites

another animal or a human, it can transmit the bacteria to the victim's bloodstream.

In the northeastern United States, Lyme disease is endemic—it has been present there for a long time. The main local reservoir of Lyme disease bacteria is the white-footed mouse. The mice also serve as hosts for the ticks, particularly ticks in their developing stages. Adult ticks prefer to make their home on deer, where they feed and mate. Once engorged with blood, the adult female tick drops to the ground to lay her eggs, from which larvae soon emerge to begin the cycle anew.

## A Shift in Circumstances

Pathogens have coexisted with animals and insects for many years without causing disease in humans. But a change in circumstances can turn an endemic disease into an epidemic—a disease affecting many people in a community. What changed in the case of Lyme disease?

In the past, predator animals helped to limit contact between deer ticks and man by controlling the deer population. When early European settlers cleared the forests to farm, the deer population dwindled even further and the deer's predators also moved

(Continued on page 10)

All ticks: CDC

The deer tick (shown enlarged at right) spreads Lyme disease to humans



◀ Left to right: Adult female, adult male, and nymph, all shown actual size



# HOW CAN YOU PROTECT YOURSELF?

## Some Dos and Don'ts

Awake! consulted residents of insect-infested and disease-ridden regions around the world for tips on staying healthy. You may find their advice to be helpful in your area.

### Cleanliness—Your First Line of Defense

#### ■ Keep your home clean

"Cover food-storage containers. Keep cooked food covered until it's served. Clean up food spills right away. Don't leave dishes unwashed overnight or throw food garbage outdoors to be disposed of in the morning. Cover or bury it, since insects and rodents come out at night looking for food. Also, a thin layer of concrete over a dirt floor makes it easier to keep the home clean and insect free."—Africa.

"Store fruit or anything that attracts insects away from the house. Keep farm animals—goats, pigs, chickens—out of the house. Cover outdoor toilets. Bury animal droppings quickly or cover with lime to ward off flies. Even if neighbors don't do these things, you may be able to keep insects to a manageable level and also set a good example."—South America.

#### ■ Personal hygiene

"Soap is affordable, so wash hands and clothes often, especially after contact with people or animals. Avoid touching dead animals. Avoid touching your mouth, nose, and eyes with your hands. Clothes should be washed regularly even if they still appear clean. However, some fragrances attract insects, so avoid soaps and hygienic products that are scented."—Africa.

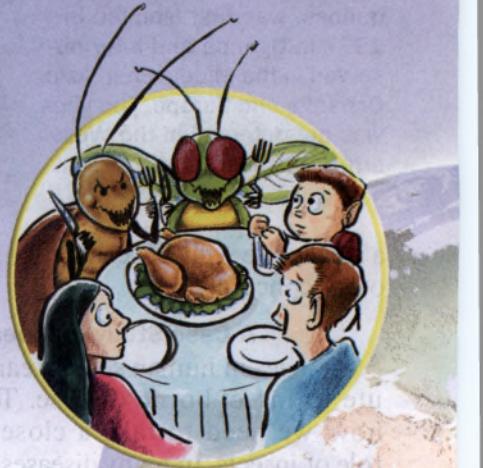
### Preventive Measures

#### ■ Eliminate mosquito breeding sites

Cover water tanks and washtubs. Eliminate all open containers that catch water. Do not let water stand in potted plants. Mosquitoes can breed in any puddle lasting longer than four days.  
—Southeast Asia.

#### ■ Minimize exposure to insects

Avoid the insects' favorite feeding times and places. The sun sets early in the tropics, so many daily activities take place in the dark, when many insects are more active. Sitting and sleeping outside increase your risk when insect-borne disease is prevalent.  
—Africa.



**Leaving food or garbage uncovered is like inviting insects to dine with you**



**Sleeping outdoors in mosquito country is like inviting mosquitoes to dine on you**



**Insects should not be our houseguests. Evict them!**



**Insecticide-impregnated mosquito nets are cheaper than medicine and hospital bills**



**Insect-borne diseases can mimic other illnesses. Give your doctor a complete history**

Wear clothes that minimize exposed skin, especially when in the woods. Apply insect repellent to your clothes and skin, always following the directions on the label. Examine yourself and your children for ticks after spending time outdoors. Keep your pets healthy and free of insects.—North America.

Minimize contact with farm animals, as insects can spread disease from them to humans.—Central Asia.

Use mosquito nets—preferably impregnated with insecticides—for all members of the family. Use screens over windows, and keep the screens in good repair. Seal openings under eaves where insects can enter. Such preventive measures cost some money, but you will lose even more money if you must take a child to the hospital or if a wage earner becomes too sick to work.  
—Africa.

Eliminate insect hiding places from your home. Plaster over walls and ceiling, and patch cracks and holes. Cover the underside of thatched ceilings with insect-proof cloth. Remove clutter—such as piles of paper or cloth or clusters of pictures on the walls—where insects hide.—South America.

Some people regard insects and rodents as houseguests. They are not! Keep them out. Use insect repellents and insecticides—but only according to instructions. Use fly traps and flyswatters. Be inventive: One woman made a cloth tube, filled it with sand, and put it in the space under the door to keep insects from entering.  
—Africa.

#### ■ **Preventive medicine**

Keep your resistance up by getting proper nutrition, rest, and exercise. Reduce stress.—Africa.

Travelers: Inform yourself in advance of the latest information on risks. Data is available from public health departments and government Internet sites. Before you travel, take preventive treatment appropriate for the area you will visit.

### If You Feel Sick

#### ■ **Get medical attention quickly**

Most diseases are easier to cure when diagnosed early.

#### ■ **Beware of misdiagnosis**

Seek doctors who are familiar with vector-borne diseases and with tropical diseases if appropriate. Tell your doctor all your symptoms and where you have traveled, even in the past. Use antibiotics only if necessary, and finish the course of treatment.

## Do Insects Spread HIV?

After more than a decade of investigation and research, entomologists and medical scientists have found no evidence that mosquitoes or any other insects transmit HIV—the AIDS virus.

In the case of mosquitoes, for instance, the insect's mouth parts are not like a syringe with a single opening through which blood could be reinjected.

Rather, mosquitoes draw blood in through one passage while delivering saliva through another. Then, explains Thomas Damasso, an HIV specialist with the District Health Management Team in Mongu, Zambia, the mosquito's digestive system breaks down the blood, destroying the virus. HIV is not found in insect feces. And unlike malaria parasites, HIV does not get into the mosquito's salivary glands.



To acquire HIV, a person must be exposed to a large number of infectious particles. If a mosquito's meal is interrupted and it flies directly to another victim, any amount of blood that might remain on its mouth parts would be too small to be significant. According to experts, even swatting a mosquito filled with HIV-positive blood over an open wound would not cause HIV infection.

(Continued from page 7)

on. But during the mid-1800's, many farms were abandoned as agriculture moved westward, and the forest began to reclaim the land. The deer came back, but their natural predators did not. Thus, the deer population rebounded explosively, and so did the tick population.

Some time later, the Lyme disease bacterium arrived and took up residence for decades before emerging as a threat to humans. However, when suburbs began to be built at the forest's edge, children and adults in far greater numbers began to enter the ticks' domain. The ticks found humans to attach themselves to, and the humans got Lyme disease.

### Disease in an Unstable World

The foregoing scenario represents only one of the many paths taken by disease and only one example of how the actions of man influence its emergence. "Almost all the new improved diseases owe their comebacks to human meddling," writes environmentalist Eugene Linden in his book *The Future in Plain Sight*. A few other examples: The popularity and speed of modern travel can spread pathogens and their carriers around the globe. Damage to the habitats of creatures both large and small threatens biodiversity. "Pollution flows into the air and water," notes Linden, "weakening the immune systems of animals and

**Floods, unsanitary conditions, and human migration contribute to the spread of insect-borne diseases**



humans alike." He adds Dr. Epstein's summation: "In essence human tampering with ecology has weakened the globe's immune system, fostering conditions favorable for microbes."

Political instability leads to wars that damage ecosystems and destroy the infrastructures that provide health care and food distribution. Along with that, the *Biobulletin* of the American Museum of Natural History points out: "Refugees, malnourished and weak, are often forced into camps whose crowded and unsanitary conditions expose people to a range of infections."

Economic instability drives human migration, both across and within national borders, primarily into crowded urban areas. "Pathogens like crowded places," explains the *Biobulletin*.

**"Almost all the new improved diseases owe their comebacks to human meddling"**

As city populations explode, "often essential public health measures, such as basic education, nutrition, and vaccination programs cannot keep pace." Overcrowding also places an extra burden on water, sewage, and waste-disposal systems, making sanitation and personal hygiene difficult while at the same time creating conditions that foster insects and other disease carriers. Nevertheless, the situation is not hopeless, as the following article will show.

## WILL THINGS EVER IMPROVE?

**TODAY** the World Health Organization and other concerned groups are carrying out disease surveillance and control programs. Various agencies are disseminating information and promoting research into new medicines and new means of control, all in an effort to cope with the growing problem of insect-borne disease. Individuals and communities can also do much to inform and protect themselves. Still, protecting individuals is not the same as controlling disease worldwide.

Many experts believe that global cooperation and trust are vital to the success of disease control. "Rapid globalization of human niches requires that human beings everywhere on the planet go beyond viewing their neighborhoods, provinces, countries, or hemispheres as the sum total of their personal ecospheres," writes Pulitzer Prize-winning reporter Laurie Garrett in her book *The Coming Plague—Newly Emerging Diseases in a World out of Balance*. "Microbes, and their vectors, recognize none of the artificial boundaries erected by human beings." An outbreak in one country quickly raises concern not only in neighboring countries but around the world.



FOTO UNACIONES (from U.S. Army)

Some governments and peoples remain suspicious of any form of intervention—even disease-control programs—coming from beyond their borders. In addition, political short-sightedness and commercial greed often hamper unified international efforts. In the struggle of man versus disease, will the microbes gain the upper hand? Author Eugene Linden, who thinks they will, states: "It is very late in the game."

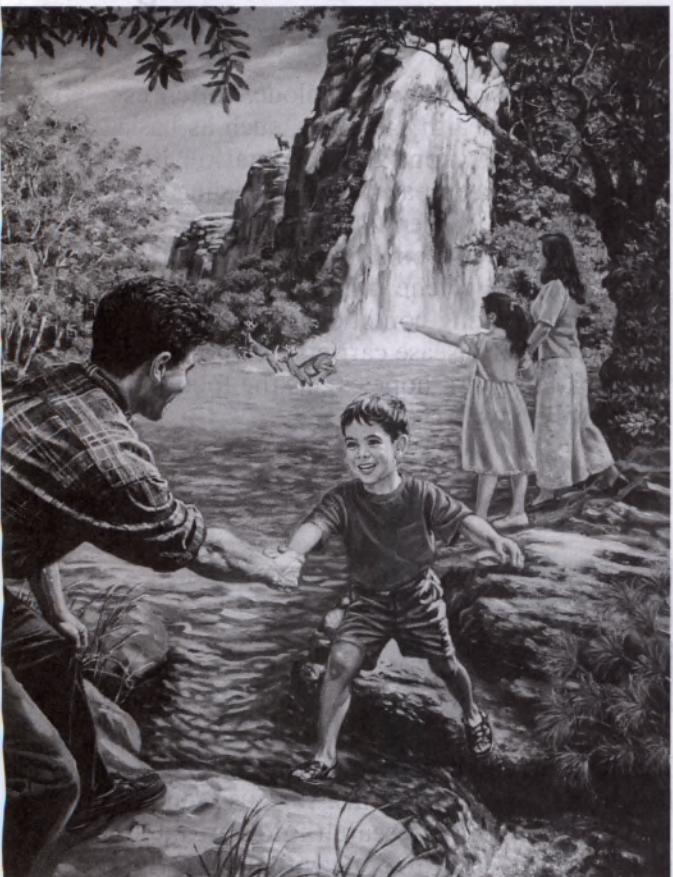
### Reason for Hope

Scientific and technological advances lag far behind in the race against sickness. And, of course, the problem of insect-borne disease is only one of many dangers to human health. But there is reason for hope. Although only beginning to understand the complex relationships among living things, scientists recognize earth's potential to heal itself. Our planet has built-in mechanisms that can restore balance to natural systems. Forests often grow up on once cleared land, for example, and the relationships among microbes, insects, and animals tend to stabilize over time.

More important, the intricate design of nature points to a Creator, a God who originally set earth's mechanisms in motion. Many scientists themselves admit that there must be a higher intelligence responsible for earth's creation. Yes, serious thinkers cannot successfully deny the existence of God. The Bible describes the Creator, Jehovah God, as almighty and loving. He is deeply interested in our happiness.

The Bible also explains that because of the willful sin of the first human, man has inherited imperfection, sickness, and death. Does that mean that we are doomed to suffer indefinitely? No! God's purpose is to make the earth a paradise, where humans can live comfortably with other creatures, both large and tiny. The Bible foretells a world where no creature, whether a large beast or a tiny insect, will pose a danger to man.—Isaiah 11:6-9.

Of course, man will have a role in maintaining such conditions—socially and ecologically. God charged man to "take care" of the earth. (Genesis 2:15) In a future paradise, man will perfectly accomplish that task by obediently following the directions of the Creator himself. Thus, we can look forward to that day when "no resident will say: 'I am sick.'”—Isaiah 33:24.



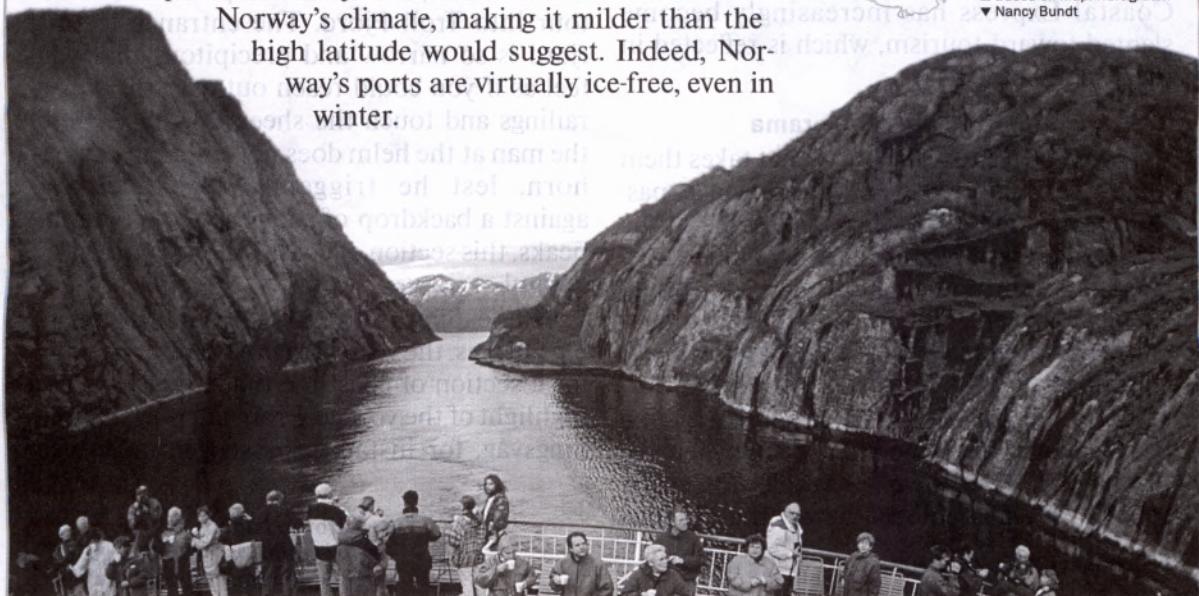
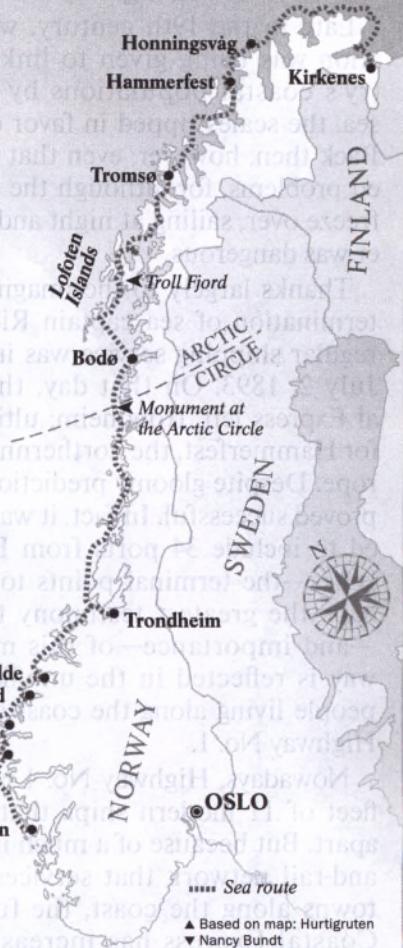
# A SPECTACULAR VOYAGE ON HIGHWAY NO. 1

BY AWAKE! WRITER IN NORWAY

EVERY evening, year-round, a ship leaves the city of Bergen, on the southwest coast of Norway, and heads north on an 11-day voyage of about 2,900 miles. It sails by thousands of islands and through numerous fjords and sounds as it visits the cities, towns, and villages along Norway's rugged and beautiful coast.

Although the sea route of the Norwegian Coastal Express is considered by many to be the most beautiful voyage in the world, the Coastal Express has a utilitarian role—that of ferrying goods, mail, and passengers as far as the terminal port at Kirkenes, well inside the Arctic Circle.

How do ships navigate those polar waters, especially in winter when ice closes off much of the Arctic to shipping? Because of its position, Norway comes under the influence of the warm waters of the North Atlantic Current and the temperate westerly winds. Both of these moderate Norway's climate, making it milder than the high latitude would suggest. Indeed, Norway's ports are virtually ice-free, even in winter.



### A Sea Highway Is Born

Late in the 19th century, when consideration was being given to linking the country's coastal populations by road, rail, or sea, the scales tipped in favor of a sea route. Back then, however, even that route presented problems, for although the sea would not freeze over, sailing at night and in bad weather was dangerous.

Thanks largely to the imagination and determination of sea captain Richard With, a regular shipping service was inaugurated on July 2, 1893. On that day, the first Coastal Express left Trondheim, ultimately bound for Hammerfest, the northernmost city in Europe. Despite gloomy predictions, the service proved successful. In fact, it was later expanded to include 34 ports from Bergen to Kirkenes—the terminal points to this day. Perhaps the greatest testimony to the success—and importance—of this maritime highway is reflected in the unofficial name the people living along the coast gave it, that is, Highway No. 1.

Nowadays, Highway No. 1 is serviced by a fleet of 11 modern ships that sail 24 hours apart. But because of a much improved road-and-rail network that services many of the towns along the coast, the function of the Coastal Express has increasingly become slanted toward tourism, which is reflected in the design of the ships.

### An Unfolding Panorama

The ships navigate a course that takes them mainly through sheltered waters. Hence, passengers are treated to 11 days of some of the best vistas that Norway has to offer—cozy hamlets set in lush pastures, seaside fishing villages, glaciers, fjords, snowcapped mountains, cliffs peppered with countless seabirds, majestic waterfalls, and even whales.

As an added bonus, passengers are free to disembark for some sightseeing when the ships berth. The town of Molde, for example, affords a magnificent view of the 87 snow-

capped peaks in the Romsdal Alps. At Ålesund and Trondheim, visitors may even have time for a short excursion, which can include a stroll along streets lined with distinctive local architecture. At some towns passengers hire a car and then rejoin their ship at its next port of call.

After departing the town of Bodø, the Coastal Express passes the Vest Fjord and heads for the Lofoten Islands, a 110-mile-long archipelago with numerous mountain peaks and cozy fishing villages. Some of Lofoten's outermost islands are little more than reefs, rocky islets, and cliffs jutting up from the ocean—in some cases marked by a lighthouse or a beacon. The archipelago is also home to some of the world's largest colonies of seabirds, including gulls, terns, eider ducks, puffins, murres, cormorants, Atlantic kittiwakes, razor-bills and, occasionally, storm petrels. The birds number well into the millions.

Every winter the sea around Lofoten comes alive with fishing boats out to catch *skrei*, a codfish. This area is also known for whales. How thrilled passengers are when these giant mammals breach and spout within viewing distance of the ship!

In summer, the Coastal Express takes a detour into Troll Fjord. The entrance to this fjord is so narrow and precipitous that you feel as if you could reach out over the ship's railings and touch the sheer rock face. Here the man at the helm does not sound the ship's horn, lest he trigger a rockslide! Set against a backdrop of snowcapped mountain peaks, this section of coast is a photographer's dream!

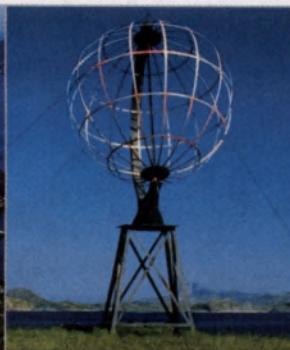
After calling at several more cities and fishing villages, the vessels turn eastward, heading for a section of coastline that to many is the highlight of the voyage. From the port of Honningsvåg, for instance, passengers may take

***The Lofoten Islands are home to many seabirds including gulls, thick-billed murres, and puffins***





**Highway No. 1  
starts at Bergen**



**Monument at  
the Arctic Circle**



**Midnight sun**  
TO-FOTO AS, Harstad

an excursion to North Cape, where the cliff rises almost vertically from the Arctic Ocean for about a thousand feet, affording spectacular vistas.

The Coastal Express docks at Kirkenes, its northern terminal, for only a few hours before casting off for the return trip to Bergen. The voyage south enables passengers to enjoy scenery they may have missed while sleeping on the journey north. At the Arctic Circle, for example, one can see the mighty Svartisen ice sheet, which covers about 140 square miles. The ships then cruise by the beautiful mountain range named the Seven Sisters and by Torghatten, a squat, bulbous mountain with a large natural tunnel cutting right through it, so that it looks like a hat with a hole in its

crown. Between the towns of Måløy and Florø, the express skirts the Hornelen, a 2,800-foot-high mountain that rises so steeply from the sea that here too the helmsman does not sound the horn for fear of causing a rockslide.

#### **The Midnight Sun and the Polar Night**

Tourists who make the journey in summer can experience uninterrupted daylight for virtually the entire voyage. In fact, much of Highway No. 1 is in "the land of the midnight sun," north of the Arctic Circle.

**The Seven Sisters**

Per Eide





**Coastal village in  
dark wintertime**

Here the summer sun shines through the night. At North Cape, for instance, the sun does not set for almost 12 weeks!

Winter travelers experience the opposite—a long polar night. But winter has its own beauty when sky, ocean, mountains, and snow are bathed in the soft colors of twilight as the sun nears, but fails to rise above, the horizon. Moreover, winter skies furnish the perfect backdrop for one of the grandest shows of all—the famous aurora borealis, or northern lights. When winds of electrically



**Aurora borealis,  
the northern lights**

© TO-FOTO AS, Harstad



**Voyage ends  
at Kirkenes**

Hallgeir Henriksen

charged solar particles penetrate the polar skies, green and yellow-green lights, sometimes including shades of red, dance across the star-studded sky in awe-inspiring bands and curtains that arc, flicker, and undulate to their own cosmic rhythm.

Of course, you do not have to be on the Coastal Express to enjoy many of these magnificent sights. Thanks to an expanded road-and-rail network, much of Norway can also be enjoyed through the window of a car or a train. For those who are on a tight budget, these modes of transport may be more economical. Nevertheless, whatever route you choose, one thing is sure—you will never tire of the unfolding vistas that change with every mile and every season along Norway's spectacular coast.



## Young People Ask . . .

# How Can I Cope With the Challenges of Being an Adopted Child?



***"I don't know anything, really, about my natural parents, and that upsets me a lot."***

—Barbara, aged 16.

***"I don't have the foggiest idea where I was actually born or who my parents were. Sometimes I think about it at night."***

—Matt, aged 9.

***"When I get into arguments with my parents, I think maybe my 'real' parents would be more understanding. It's a terrible thing for me to do, and I've never said anything about it."*** —Quintana, aged 16.

**N**O DOUBT about it—life as an adopted child can have its challenges. More than a few youths struggle with feelings like those described above. Many wonder if they should find out who their biological parents are, or they wonder if life would be happier with them. And these are not the only challenges.

In the preceding article in this series, we discussed a few negative assumptions that some adopted youths may make about themselves.\* Combating such discouraging thoughts is essential to finding joy in life as an adopted child. What, though, are some of the other challenges that may arise, and how can you take practical steps to cope with them?

### Are They My "Real" Parents?

Thirteen-year-old Jake says that he used to dwell on thoughts of his biological mother. That caused him some problems with his adoptive parents.

\* See the article "Why Did I Have to Be an Adopted Child?" in the April 22, 2003, issue of *Awake!*

He recalls: "Whenever I got mad I'd say, 'Oh, you're not my real mother—you can't punish me like that!'"

As you can see, Jake had to come to grips with a big question: Who was his "real" mother? If you are adopted, you may be wrestling with the same issue, especially if you find yourself wondering whether your biological parents might treat you better than do your adoptive parents. But is simple biology—the birth process—the only thing that can make people into "real" parents?

Jake's adoptive mother didn't think so. He says: "My mother would say, 'Yes, I *am* your real mother. Even though you had a birth-mother, I am your real mother now.'" When adults take a child into their home and agree to become responsible for housing, feeding, and raising the child, caring for the child's needs, they indeed become "real" parents. (1 Timothy 5:8) It is likely so in the eyes of the legal authorities of the land where you live. What about in the eyes of God?

Consider what may be the most famous case of adoption in history—that of Jesus Christ. Jesus was not the biological son of Joseph the carpenter, yet Joseph adopted the child as his own. (Matthew 1:24, 25) As Jesus grew up, did he rebel against Joseph's authority? On the contrary, Jesus understood that it was God's will for him to obey his adoptive father. Jesus was well familiar with a law that Jehovah had given to the children of Israel. What law was that?

### Honor Your Father and Mother

The Scriptures tell young ones: "Honor your father and your mother." (Deuteronomy 5:16) The word "honor" is often used in the Bible to indicate respect, esteem, and consideration. You can show your legal guardians such honor by being kind to them, respecting their dignity, listening to their viewpoint, and being ready to fulfill any reasonable requests made of you.

What, though, about those times when your adoptive parents seem unreasonable? Grant-

ed, that will happen. All parents are imperfect, whether adoptive or not. Their flaws can make obedience a real challenge. And it is not surprising if at such times you tend to focus on your adoptive status and wonder if it somehow reduces your obligation to obey. But is that really the case?

It may help you to think of Jesus' situation. Remember, he was *perfect*. (Hebrews 4:15; 1 Peter 2:22) But his adoptive father was not; nor was his natural mother. Likely, then, there were occasions when Jesus could see that his parents were in the wrong. Did he rebel against Joseph's imperfect headship or Mary's flawed maternal guidance? No. The Bible tells us that as Jesus grew up, "he continued subject" to his parents.—Luke 2:51.

Now when you and your adoptive parents have a difference in viewpoint, you may be convinced that they are wrong. You must admit, though, that you are imperfect too. So there is always the possibility that *you* are in the wrong. At any rate, is it not the best course to follow Jesus' example? (1 Peter 2:21) Doing so will help you to obey. But there is an even greater reason for obeying your parents.

The Bible says: "You children, be obedient to your parents in everything, for this is well-pleasing in the Lord." (Colossians 3:20) Yes, your obedience makes your heavenly Father happy. (Proverbs 27:11) And he wants you to learn obedience because he wants you to be happy as well. His Word encourages young ones to obey, adding, "that it may go well with you and you may endure a long time on the earth."—Ephesians 6:3.

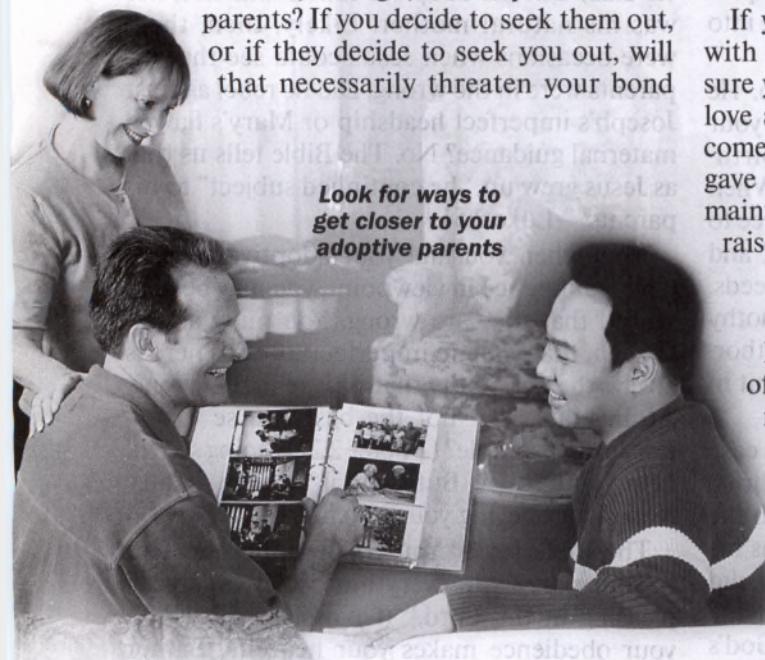
### Strengthening the Bond With Your Adoptive Parents

Having a good relationship with your adoptive parents involves much more than honor and obedience. Likely, you want a home atmosphere that is warm and loving. Your adoptive parents have the responsibility to create such an atmosphere. But you can play an important part as well. How?

First, look for ways to get closer to your parents. Ask them about themselves, their lives, their interests. Seek their advice on some problem that is weighing you down, choosing a time when they are relaxed and receptive. (Proverbs 20:5) Second, look for ways to contribute to the functioning of the household, such as by helping with housework and chores without having to be prompted.

What, though, about your natural parents? If you decide to seek them out, or if they decide to seek you out, will that necessarily threaten your bond

**Look for ways to  
get closer to your  
adoptive parents**



with your adoptive parents? In the past, adoption agencies often refused to pass on information to help biological parents find the child they gave up for adoption or vice versa. Today, policies in some lands are more open, and many adoptive children have been brought face-to-face with biological parents whom they do not remember at all. Of course, adoption policies may be different where you live.

At any rate, whether to seek out your biological parents or not is a personal decision, and it may not be an easy one. Adopted youths have a wide range of feelings on the issue. Some yearn to find their biological parents; others are determined not to do so. However, you may be

assured that many adopted youths have been brought into contact with their natural parents without losing the stable relationship they have with their adoptive parents.

Seek advice from your adoptive parents and perhaps from mature friends in the Christian congregation. (Proverbs 15:22) Weigh your options carefully, and allow some time before taking any action. As Proverbs 14:15 says, "the shrewd one considers his steps."

If you decide to try to form a connection with your natural parents, endeavor to reassure your adoptive parents of your continued love and respect. That way, as you gradually come to know those who caused your birth and gave you up for adoption long ago, you will maintain the stable bond with the parents who raised you and trained you.

**Strengthen Your Bond  
With Your Heavenly Father**

Many adopted youths struggle with a fear of abandonment. They worry that they might lose their adoptive family as they once lost their biological family. Such fears are understandable. Still, remember these wise words: "There is no fear in love, but perfect love throws fear outside." (1 John 4:18) Do not let morbid fears of losing your loved ones dominate you. Instead, build your love for others, including all those in your household. Above all, though, build your love for your heavenly Father, Jehovah God. Perfectly reliable, he never abandons his faithful children. He can soothe your fears.

—Philippians 4:6, 7.

Catrina, who was adopted as a child, says that reading the Bible greatly assisted her in drawing closer to God and living a happy, productive life. She says that a close relationship with Jehovah "is so important because our heavenly Father knows how we feel." Catrina's favorite scripture is Psalm 27:10, which says: "In case my own father and my own mother did leave me, even Jehovah himself would take me up."

**M**ATH is not just for scientists. It is for all of us. When you shop, decorate your home, or listen to the daily weather report, you are using or benefiting from mathematical principles.

Many people seem to feel that math (or, maths) is boring and unrelated to their everyday life. Do you feel that way? Let us examine how useful, accessible, and fascinating math can be.

#### A Shopping Trip

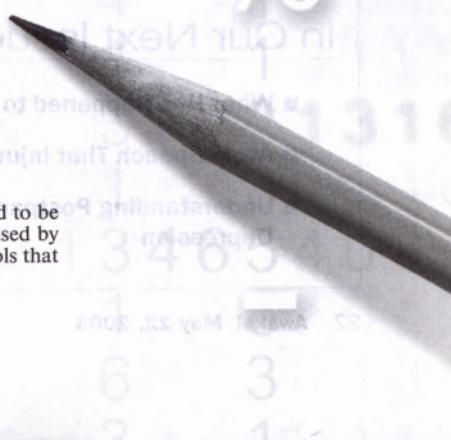
Imagine you are out shopping and you come across a big sale. An item with an original price of \$35 has been marked down, or reduced, by 25 percent. That sounds like a bargain. But what is the new price? Arithmetic comes to your rescue.\*

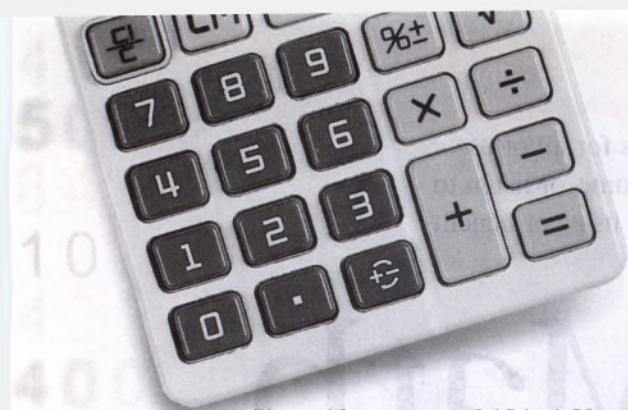
First, subtract the markdown percentage from 100 percent, and you get 75 percent ( $100\% - 25\% = 75\%$ ). Then multiply the original price by the result, in this case 75 percent (0.75). The new price would be \$26.25 ( $35 \times 0.75 = 26.25$ ). Now that you know the final price, you can decide just how good the sale really is.

What if you did not bring a calculator with you? Perhaps you can work out the answer in your head. For example, say that an item originally priced at \$45 has been marked down by 15 percent. Here is a tip for figuring percentages in your head. Use 10 percent as a base. To figure 10 percent of a number, you divide the number by 10. That is relatively easy to do in your head. Then, since you know that 15 is equal to 10 plus 5 and that 5 is exactly half of 10, you can quickly calculate the final sale price by addition and subtraction. Let us try that.

\* Arithmetic (a term derived from a Greek word meaning “number”) is said to be the oldest branch of mathematics. It goes back thousands of years and was used by the ancient Babylonians, Chinese, and Egyptians. Arithmetic gives us basic tools that we can use each day to count and measure the physical world around us.

# Math Is for Everyone





Since 10 percent of 45 is 4.50, 5 percent of 45 will be half that amount, or 2.25, and 15 percent will be the sum of those two figures, or 6.75 ( $4.50 + 2.25 = 6.75$ ). Finally, we subtract 6.75 from 45 to arrive at the discounted price of 38.25 ( $45 - 6.75 = 38.25$ ). Incidentally, you can use a similar approach to figure out the amount of sales tax on an item or the amount of tip to add to your bill at a restaurant. Of course, in these cases, instead of subtracting, you would add the result to the original price.

Be careful, though, not to jump to wrong conclusions when figuring in your head. A dress or a pair of slacks whose price has been discounted by 40 percent and then slashed again by another 40 percent has actually been reduced in price by only 64 percent, not 80 percent. The second discount is taken on the reduced price, not the original price. It might still be a bargain, but it is good to know the facts.

There are problems, though, that arithmetic alone cannot solve. Fortunately, many other math tools are available.

## In Our Next Issue

- What Has Happened to Values?
- Avoid Speech That Injures
- Understanding Postpartum Depression

### Decorating at Home

Let us say that you need to replace the flooring in your apartment and you are working within a tight budget. Before you go to the store, you first sit down to figure out what you need. The biggest question is, How much flooring should you buy? Understanding some basic geometry can help.

Flooring is often sold based on how many square units it will cover. A square foot, for example, is one foot long and one foot wide. Before you can determine how much flooring you will need, you first have to figure out how much floor area there is in each room and hallway in your apartment. The floor plans of most buildings are made up of a number of squares and rectangles. So the following formula would help you to accomplish that:  
 $a = l \times w$  (area equals length times width). This is the geometric formula for determining the area of a rectangle or a square.

To illustrate how this formula is used, let us say that you are putting new flooring in every room of the apartment except the kitchen and the bathroom. You measure each room and come up with a floor plan like the one shown on page 23. The squares and rectangles in the plan show the size and location of the rooms. Using the above formula, see if you can calculate how many square units of flooring you will need. Here are some hints: You could calculate the area of each room by itself and then add the results together. Or you could save some time by calculating the total area of the floor plan and then deducting the area of the kitchen and the bathroom.\*

The word "geometry" also comes from Greek, and it literally means "measurement of land." It involves studying the area, distance, volume, and other properties of shapes and lines. Practical formulas exist for every shape imaginable in two and three dimensions. Each day, scientists, engineers, and home decorators alike use these formulas to

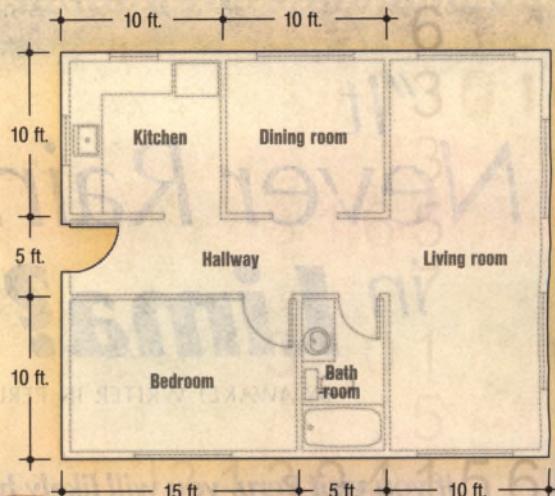
\* Answer = 600 square feet of flooring.

figure out exactly what they need. But there is more to math than arithmetic and geometry.

### Use Math Every Day

Other branches of mathematics include algebra and calculus. Over the centuries math has become a truly universal language shared by everyone regardless of culture, religion, or gender. In science, industry, business, and everyday life, math has the power to solve some of the toughest riddles we face. Whether you are trying to unravel the mysteries of the universe or balance the family budget, being able to use the language of numbers is a key to success.

So even if you hated math in school, why not take a fresh look at it now? Like any language, math is learned best through use. Try using some math every day. Try your hand at math puzzles and games. One positive experience might change the way you feel. It will certainly enhance your appreciation for the wisdom of the Great Mathematician who designed these intriguing concepts in the beginning, our Creator, Jehovah God.



# "It Never Rains in Lima?"

BY AWAKE! WRITER IN PERU

**If you visit Peru, you will likely hear someone say: "It never rains in Lima"—the nation's capital. Shivering in the chilly, damp air, you may well wonder if that is so.**

LIMA is located in the great desert that runs along the Pacific Coast of South America—a region having one of the world's most unusual climates. This arid strip of land stretches from the Sechura Desert in Peru's far north all the way to the Atacama Desert of northern Chile.

The coastal desert lies between the rugged Andes and the azure Pacific Ocean. From a distance, there appears to be nothing along the coast but stark, rugged hills of stone and sand in every imaginable shade of beige and brown. Erosion has draped many of the hillsides with cascades of brown rocks. These gradually make their way down the slope toward the sea, occasionally nudged along by the frequent earth tremors that occur here.

Once the rocks reach the shore, the pounding waves of the Pacific slowly grind them into sand, which the wind forms into crescent-



shaped dunes. In parts of this vast desert, no rain has been recorded in 20 years, making it one of the driest spots on earth. But what makes this area so dry?

## The Rain Shadow of the Andes

The answer has to do with the trade winds, which blow from east to west. As they encounter the high, saw-toothed ridges of the Andes Mountains, the winds are forced upward. Ascending to pass over the Andes, the winds cool, causing the moisture they carry to condense and fall as rain and snow, mostly on the eastern side of the range. Thus, the mountains cast a rainless shadow over the western slope.

Additionally, neither the cold Peru Current, or Humboldt Current, flowing northward from Antarctica nor the wind blowing in from the South Pacific provides much moisture. All these factors combined produce an extremely dry, though not hot, desert. Oddly enough, although rain is scarce, the humidity of the air is very high, especially during the Peruvian

winter, from May to November. Where does this humidity come from?

### The Garúa

In wintertime a blanket of low clouds hangs over the coast, and a heavy mist, which Peruvians call *garúa*, rolls in from the Pacific Ocean. During this season, months may pass without a glimpse of the sun, giving the region a chilly—some say, dismal—climate. Although the area lies in the Tropics, average winter temperatures in Lima remain between about 60 and 64 degrees Fahrenheit. In the winter relative humidity can reach 95 percent without raining, and the well-adapted *Límenos*, residents of Lima, bundle up against the damp, penetrating cold.\*

\* In the summer when temperatures climb to 70 or 80 degrees Fahrenheit, Lima residents shed their heavy clothes and enjoy the many fine beaches along the coast.

### The Pacific coastline south of Lima

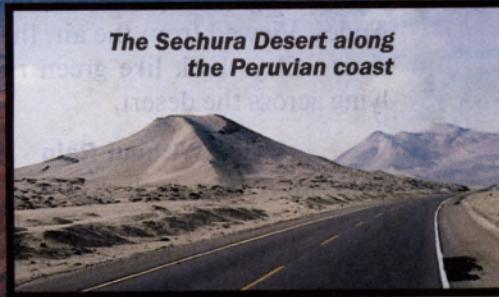
© Yann Arthus-Bertrand/CORBIS

The light winter drizzle is enough to wet the streets of Lima and also to bring life back to dormant desert plants on the high coastal hills. Large flocks of goats, sheep, and cattle take advantage of the green pastures that result. Moreover, since the early 1990's, some towns in the desert have been using fog collectors—large polypropylene nets on which the fog condenses—to harvest water for drinking and for watering gardens from the low, mist-laden clouds.

Still, moisture from the fog and clouds is not enough for wild vegetation to flourish year-round. Total precipitation in Lima is rarely more than two inches a year and comes mostly from condensation of the *garúa*. Therefore, the only green plants that thrive in the coastal desert are those that are irrigated by small rivers that bring life-giving water



**The Sechura Desert along the Peruvian coast**



**Fog collector panels,  
Mejía, Peru**



**Original Inca canals  
still function in  
Ollantaytambo, Peru**

▲ © Jeremy Horner/CORBIS; Inset: Courtesy of the charity FogQuest; www.fogquest.org

down from high in the snowcapped Andes. Viewed from the air, the little river valleys look like green ribbons lying across the desert.

#### **Living Without Rain**

To survive in such a dry climate, Peru's ancient coastal cultures—such as the Chimu and the Mochea—built sophisticated irrigation systems. Like those of ancient Egypt, these extensive agricultural projects sustained highly organized civilizations. The ancient Peruvians built well-developed cities, including pyramid temples, large walls, and reservoirs, using adobe bricks. Because of the paucity of rain, these ruins are well preserved, giving archaeologists a good picture of pre-Columbian life in Peru. Today many coastal settle-

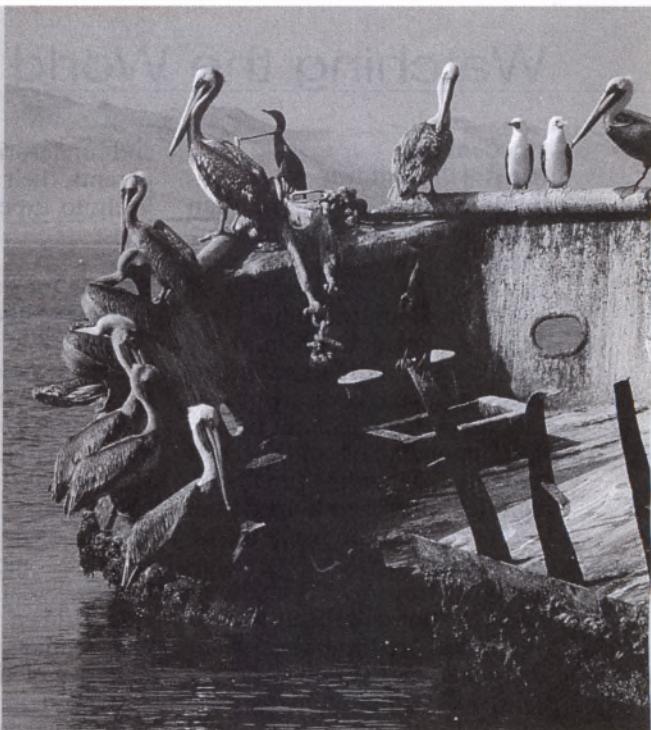
AP Photo/Martin Mejia



**Torrential rains, attributed to the El Niño weather phenomenon, caused severe flooding in Ica, Peru, on January 30, 1998**

## WEALTH FROM WASTE

For millennia the cool, nutrient-rich seas off the west coast of Peru have provided food—largely sardines and anchovies—for millions of seabirds. Because there is little rain in the area, over the years the birds' droppings accumulated on the coastal islands in immense piles—sometimes over 100 feet high! Before the Spanish arrived, it was discovered that these droppings, called guano after their Quechua Indian name, were an excellent fertilizer. In the latter half of the 19th century, guano became a highly successful export product for Peru, until it was replaced in the world market by chemical fertilizers. By then, the old accumulations had been depleted. Today supplies are mostly limited to the birds' current production.



ments are still dependent on restored aqueducts and canals that were first built thousands of years ago.

As the early desert inhabitants learned, the desert soil is very fertile where there is water. Peru's modern-day coastal irrigation projects provide the needed water to cultivate a variety of crops, including cotton, rice, corn, sugar-cane, grapes, olives, and asparagus as well as other vegetables and fruits. At present, more than half of Peru's population of about 27 million live along the narrow coastal strip.

### When It Does Rain

Sometimes, however, rain does fall in parts of the desert, including Lima. Every few years, the cool Peru Current gives way to warmer waters that sweep over from the western Pacific. This phenomenon, known as El Niño, signals the imminent arrival of rain. Especially strong El Niños struck in 1925, 1983, and 1997/98. Understandably, desert dwellers, who are used to getting practically no rain at

all, are ill prepared for torrential downpours and the ensuing floods.

One such flood struck Ica, Peru, in 1998. The Ica River inundated large areas of the city, and the mud-brick homes just melted away. Other parts of the desert benefited, soaking up the moisture and becoming lush pastures. The latest El Niño turned much of the Sechura Desert into a garden of green sprinkled with beautiful flowers, reminding us of God's promise that one day 'the desert will blossom as the saffron.' (Isaiah 35:1) The heavy rains also created a huge lake in the desert—estimated to be some 185 miles long and 25 miles wide—that newspapers nicknamed La Niña.

Peru's great coastal desert certainly adds to the wide variety of natural wonders found on our planet. Although it seldom rains here, through irrigation and proper use of precious water, this arid land has become a pleasant home for millions.

# Watching the World

## The Cost of Marital Breakdown

After analyzing more than 100 pieces of research spanning more than two decades, Rebecca O'Neill, project manager of the Civitas Family Studies Unit, reports that "for many mothers, fathers and children, the 'fatherless family' has meant poverty, emotional heartache, ill health, lost opportunities, and a lack of stability." According to O'Neill, children of broken homes were "50 per cent more likely to suffer health problems, twice as likely to run away from home and five times as likely to suffer abuse," reports *The Sunday Telegraph* of London. The paper adds: "Children living without their natural father were also three times as likely to have difficulty getting on with other people and to struggle at school. As teenagers, they were twice as likely to drink, smoke, take drugs, . . . commit crime, have underage sex and to become teenage parents." According to the report, even where married couples were as poor

and underprivileged as single parents, their children were less likely to experience such problems.

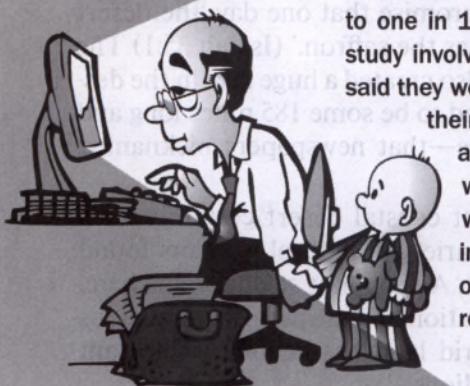
## Suicide Tops the List of Violent Deaths

"Suicide is the greatest single cause of violent death around the globe," reports London's newspaper *The Independent*. The article, based on a report by the World Health Organization, adds that 1.6 million people died by violent means in 2000. Suicide claimed 815,000 lives that year, while homicide claimed 520,000 and wars and conflicts 310,000. The vast majority of the deaths in 2000 "occurred in developing countries with fewer than 10 per cent in the developed world," states the paper. Belarus, Estonia, and Lithuania recorded suicide rates more than four times that of Britain. In Africa and North and South America, the homicide rate is more than double the number of suicides, but in Australia, Europe, and the Far East, the reverse is true.

## Sleep-Deprived Children

A lack of sleep is having disastrous effects on children's health, says *U.S. News & World Report* magazine. Sleep-deprived children perform poorly in school and can have difficulty making friends. "Children with sleep debts often have a shortened attention span, and are irritable, frenetic, and impatient," reports the magazine. Physicians are concerned that parents are often responsible for these problems. Child psychotherapist Barbara Braun-McDonald says: "If you are keeping your child up until 11 p.m. for family time, you need to re-examine your life." Parents are encouraged to establish a regular bedtime and wake-up time, even on the weekends, in order to build healthy sleep patterns. Other suggestions include using a regular, prebedtime routine, such as bathing, cuddling, and reading a story for younger children, and limiting access to television or computer within an hour of bedtime.

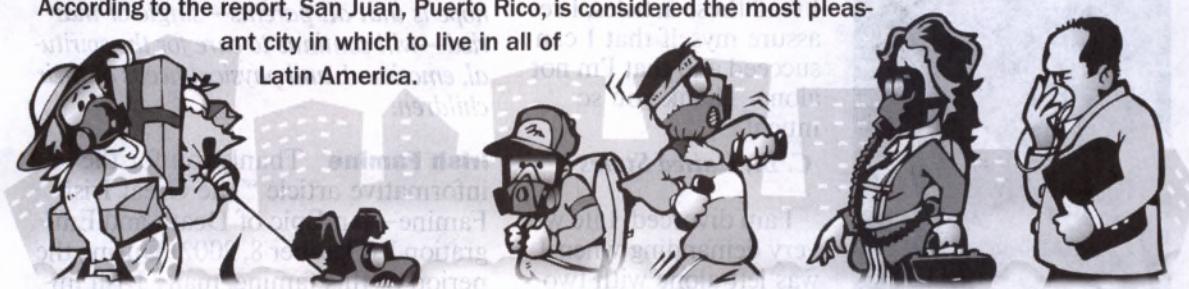
## Improved Productivity?



"One in four Canadians is now working more than 50 hours a week, compared to one in 10 a decade ago," reports the *Vancouver Sun* newspaper. A federal study involving 31,500 working Canadians found that "half of the respondents said they work at home or on weekends, donating an extra 27 hours a month to their employer." One key reason is technology. "The survey found virtually all the unpaid overtime done at home . . . is 'computer-supported' work," says the newspaper. So instead of leading to a four-day work week with more time for leisure, "technology is a prime culprit in driving up the incidence of stress, illness, burnout, absenteeism and all other costs eating into productivity." The paper adds: "The majority of respondents agree that technology has increased the interest in their work and improved their productivity. At the same time, almost no one said technology decreased their workload or stress on the job."

## Contamination in Large Cities

"Mexico City, Caracas, Bogotá, and Havana are among the most contaminated cities in the world," reports the newspaper *El Universal* of Mexico City. That is the conclusion of a study conducted by Mercer Human Resource Consulting Society, published in London. The study, which examined the effects of pollution on cities around the world, took into account such factors as air quality, waste treatment, safety, housing, education, transportation, and public services. Among European cities, Zurich and Vienna offer the highest quality of life overall. As to the cleanest cities in the world, Calgary and Honolulu top the list. According to the report, San Juan, Puerto Rico, is considered the most pleasant city in which to live in all of Latin America.



## “Games, Snacks, and Blood”

Japanese youths have been frequenting "spacious air-conditioned rooms filled with free videos, computer games, snacks and even foot massagers," reports *IHT Asahi Shimbun*. "There's just one catch: blood must be spilled" because the facilities are blood donation centers run by the Japan Red Cross Society. "People donate blood in a party-like atmosphere," says the newspaper. "Many young people hang around after donating blood and help themselves to free doughnuts, juice and computer games. Another draw is the free fortunetelling held several times a week." There are also makeup lessons, Shiatsu (acupressure), concerts, massages, and garage sales. In order to stem a sharp decline in blood donations, the Red Cross is converting its centers throughout the country. Once reputed to be "dismal and spooky," the centers are becoming "popular haunts among teenagers and those in their 20s," states the newspaper.

## Cruise Ships and Pollution

"Luxury cruise ships that carry millions of passengers each year to the world's most remote beauty spots are endangering marine life with a trail of pollution," reports *The Sunday Times* of London. A superliner carrying nearly 4,000 people, including passengers and crew, daily dumps tens of thousands of gallons of oily bilge water, sewage, and wastewater from showers and laundries, plus 15 gallons of toxic chemicals and seven tons of garbage. At sea, the amount of waste generated by passengers is far greater than if they vacationed on land. In 2000, some 240 cruise ships carried ten million people to ecologically sensitive areas, such as Alaska's Glacier Bay, the Caribbean coral reefs and islands, historic Mediterranean coasts, and even Antarctica. It is estimated that 50 more ships will be in use by 2005. Roger Rufe, of Ocean Conservancy, says: "These cruise [vacations] are increasingly popular but the ships are like floating cities without

any rules on sewage and waste disposal."

## Sales of Pope Memorabilia Fading

For years "selling religious articles [in Poland] guaranteed sure income," reports the Polish edition of *Newsweek*. Recently, however, "a crisis" in the sale of holy idols has been observed. Despite much publicity about the pope's visit to Poland in 2002, there was little demand for traditional religious articles, such as chains and paintings. "The market was flooded with millions of plaster and metal busts, mats, paintings, and figurines" with the pope's image, states the magazine, but "customers have become choosy." One idea, however, has grown in popularity. It is a plastic card with "holy images" on one side and "golden beads melted into the plastic" on the other side. These "rosary cards" are "the latest and hottest pope" memorabilia, states the Polish weekly *Wprost*.

# From Our Readers

**Single-Parent Families** I just can't express enough how much I appreciated reading the cover series "Single-Parent Families Can Succeed." (October 8, 2002) I can't stop reading it! I am a single parent of two children. Every time I read these articles, I reassure myself that I can succeed and that I'm not alone. Thank you so much!



that he hears our cries and responds with such loving articles. In this way he assures us that he is thinking of us and that he loves us.

**L. T., Czech Republic**

Thank you so much for printing these articles. I had just begun to feel overwhelmed by my present circumstances of being a single parent and returning to the work force after having been a stay-at-home mom for years. However, the articles gave me the hope and encouragement I needed to go on. I plan to apply the suggestions, such as being well organized and having a regular family Bible study. I will keep this magazine nearby and will read it every time I begin to feel overwhelmed again.

**B. A., United States**

I became a single parent to my son and daughter 14 years ago. I thank you for the effort you make in your publications, yet I was disappointed in parts of this series. For example, the word "successful" was used over and over. I feel that I've implemented the suggestions on page 11, but I have not had the same level of success as the parent pictured on that page. Surely success is not just a matter of your child becoming a full-time evangelizer or a missionary.

**M. S., Japan**

**"Awake!" responds:** We realize that success can be measured in different ways. Our intent was to offer practical suggestions to help single parents cope with life's daunting

challenges and to provide reassurance that their efforts are not futile. Examples of youths in full-time service were used to show that single parents have succeeded in raising God-fearing children. Our hope is that all parents—single or married—will continue to care for the spiritual, emotional, and physical needs of their children.

**Irish Famine** Thank you for the informative article "The Great Irish Famine—An Epic of Death and Emigration." (October 8, 2002) During the period of this famine, many Irish immigrants came to Canada by ship. Many died because of cholera, typhus, and other diseases. Many children were orphaned, and some were adopted by French-speaking families and given French surnames. Hence, in time, the Irish background of many people was lost.

**K. S., Canada**

**Young People Ask** I want to comment on your article "Young People Ask . . . Why Doesn't My Parent Love Me?" (September 22, 2002) After my parents divorced, I started going through a serious depression. At times, it seemed that no one could help me. I have the greatest mother and brother anyone could ask for, but sometimes I feel like a piece of my heart is missing—the piece my dad has taken. I prayed to Jehovah for something to come along and build me up. That is just what this article did. It helped me to feel better about myself, and I learned how to cope. What really touched me was Psalm 27:10. It helped me to realize that Jehovah loves me even when it seems no one else does.

**D. B., United States**

# THE "STEEPEST STREET"?

■ What is special about Baldwin Street, located in Dunedin, New Zealand? Dunedin has long claimed that this street is the steepest street in the world. Although this claim has been challenged, one thing is certain: Baldwin Street is unusually steep.

This well-known street has become a popular tourist destination for visitors from around the world. No, you do not have to be a mountaineer to reach its top. You can go up this 1,180-foot street on foot, but motorists are discouraged from trying to drive up it.

## Join Us in the Climb

The day is bright as my two companions and I scan the full length stretching upward before us. Once into our journey, we are soon breathing deeply while leaning forward to keep our balance. "It's like climbing a concrete wall," someone gasps. A bench appears just at the right time and beckons us to take a rest.

Our ascent continues, and soon we are at the top surveying the panorama, while catching our breath. Below us are neat rows of well-kept homes and gardens. The horizon extends to include dark-green native bush bordering lush pastures—all of this set against a background of blue sky.

Our walk to the top has not broken any speed records. After completing the descent, we stop to take a picture of our conquest and to claim our copy of the city's Certificate of Achievement saying that we climbed the "World's Steepest Street."—Contributed.



Baldwin St

World's  
Steepest Street



Come, Hear the Public Discourse

# “Who Are Giving God Glory Today?”

To religious people the very idea of giving God glory might sound puzzling. Is not God the Preeminent Sovereign of the universe? How, then, can a mere human glorify him? Such a thing is possible, for the Bible exhorts us to “fear God and give him glory.” (Revelation 14:7) One way we can do this is by “hearing the word of God and keeping it.” (Luke 11:28) Indeed, by studying the Bible and living by its principles, we bring honor and glory to its Author, Jehovah God.

But who today are giving God glory in this way? Billions claim to be religious, but is this all that is required? How can we be certain that our form of worship is pleasing to God and thus bringing him glory? These questions will be answered in the stirring talk “Who Are Giving God Glory Today?” This public address will be delivered at the district conventions of Jehovah’s Witnesses beginning this month. Hundreds of such conventions will be held around the world. To find the location nearest you, contact Jehovah’s Witnesses in your area, or write to the publishers of this magazine. The March 1, 2003, issue of our companion magazine, *The Watchtower*, lists convention locations in the United States, Canada, Britain, and Ireland.

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