

# **Awake!**

FEBRUARY 22, 2003



## **MALNUTRITION** **“THE SILENT EMERGENCY”**

# Awake!

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## MALNUTRITION “THE SILENT EMERGENCY” 3-12

Why do so many—especially children—lack the food they need? Learn about the underlying causes of malnutrition and the means for preventing it.

- 3 A Tragedy of Great Magnitude
- 5 Deep-Rooted Causes, Far-Reaching Effects
- 10 “The Silent Emergency” Soon to End!
- 13 Displaying Love in Times of Trouble
- 22 Cenotes—Natural Marvels of the Yucatán Peninsula
- 24 A Golden Fruit With a Colorful Past
- 28 Watching the World
- 30 From Our Readers
- 31 “Awake! Saved My Life!”
- 32 “This Time It Spoke to Me”



## The Great Migration 15

When millions of wildebeests thunder across the African plains, it is an unforgettable spectacle.



## Should I Watch Music Videos? 19

More and more of them are violent and sexually provocative. What will you decide?

COVER: UN/DPI Photo by Eskinder Debebe

# A TRAGEDY OF GREAT MAGNITUDE

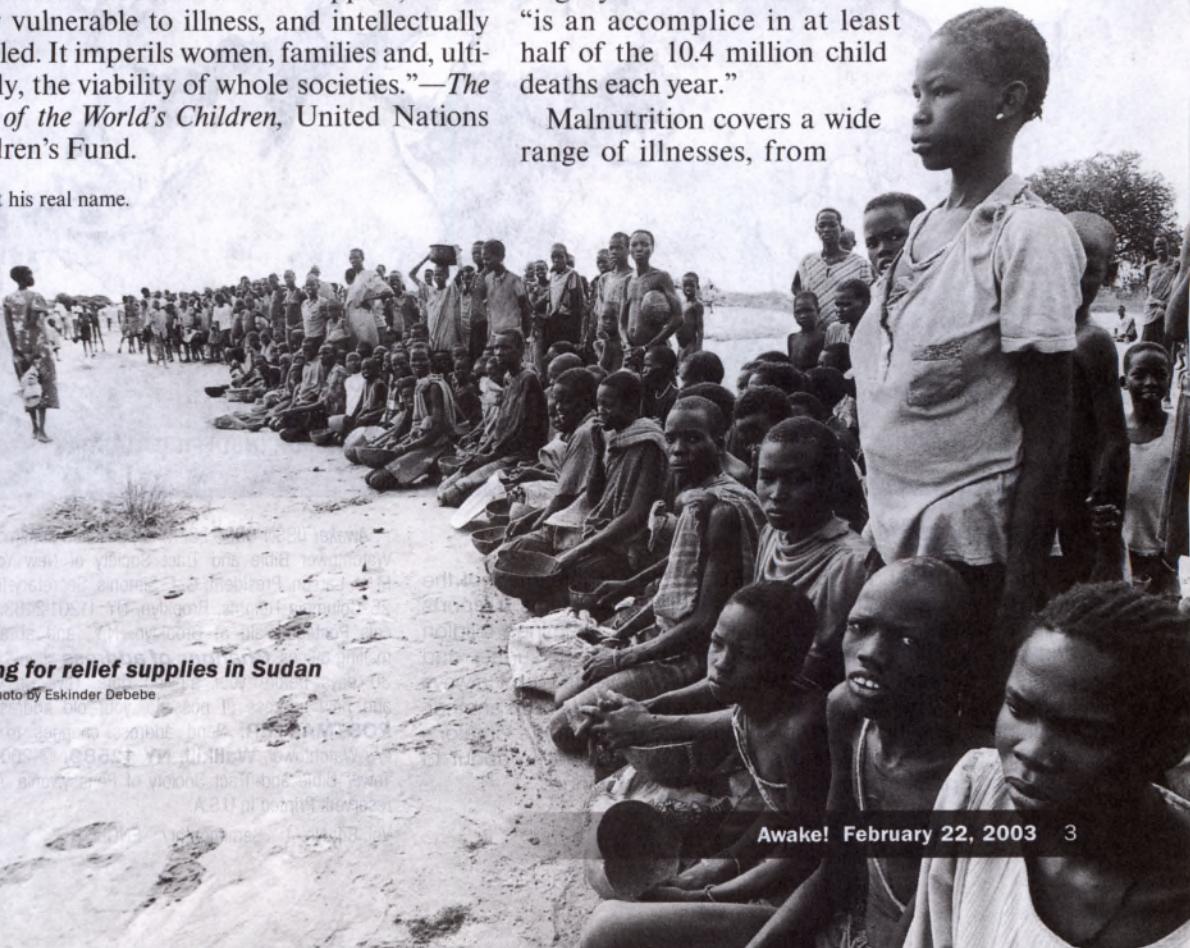
**Erik\*** is six months old. However, his weight and height are barely those of a one- or two-month-old baby. Despite being so underweight, his legs and stomach are swollen and his face is bloated and round. He is pale, his hair is brittle and dull, and he has lesions on his skin. He seems extremely irritable. As the doctor examines Erik's eyes, he must be very careful, since the eye tissue could tear easily. Erik's mental development has likely been hampered. Sadly, this child's situation is far from unique.

"IT IS implicated in more than half of all child deaths worldwide—a proportion unmatched by any infectious disease since the Black Death. Yet, it is not an infectious disease. Its ravages extend to the millions of survivors who are left crippled, chronically vulnerable to illness, and intellectually disabled. It imperils women, families and, ultimately, the viability of whole societies."—*The State of the World's Children*, United Nations Children's Fund.

\* Not his real name.

What ailment do those words describe? Malnutrition—in particular, protein-energy malnutrition (PEM), which the World Health Organization (WHO) has called "the silent emergency." What is the magnitude of this tragedy? WHO declares that it "is an accomplice in at least half of the 10.4 million child deaths each year."

Malnutrition covers a wide range of illnesses, from



**Waiting for relief supplies in Sudan**

UN/DPI Photo by Eskinder Debebe

undernourishment due to a lack of one or more nutrients—such as vitamin and mineral deficiencies—to obesity and other diet-related chronic diseases. However, PEM “is by far the most lethal form of malnutrition,” states WHO. Its principal victims are children under five years of age.

Think for a moment about Erik, mentioned at the outset, and of the millions of children who suffer from malnutrition. They are not to blame for being in that condition, nor are they able to escape it. Pediatric nutritionist Geor-

gina Toussaint told *Awake!*: “Those who suffer and pay are the least to blame yet the most vulnerable.”

Some might assume that the problem is inevitable—that there is simply not enough food for all. Paradoxically, according to WHO, “we live today in a world of abundance.” There is enough food for all the humans on earth—and more. Further, human malnutrition is the easiest illness to prevent and the cheapest to cure. Do not these facts make you feel indignant?

## COUNTRIES WITH POPULATIONS AT RISK OF INADEQUATE NUTRITION



## 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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## **Who Is Affected?**

Malnutrition is not limited to children. According to a WHO report of July 2001, "malnutrition casts long shadows, affecting close to 800 million people—20% of all people in the developing world." This means that 1 out of every 8 people in the world suffers from it.

While the largest number of undernourished people are found in Asia—mainly in the southern and central zones—the population with the highest percentage of undernourished people is in Africa. Some developing countries in Latin America and the Caribbean are next on the list.

Are developed countries free from malnutrition? No. According to *The State of Food Insecurity in the World 2001*, 11 million people who live in industrialized countries suffer from malnutrition. An additional 27 million undernourished people live in what are called transitional countries, especially ones in Eastern Europe and republics of the former Soviet Union.

Why has malnutrition become such a serious problem? Is there anything that can improve the condition of the undernourished right now? Will our planet ever be free from malnutrition? The following articles will address these questions.

# **DEEP-ROOTED CAUSES, FAR-REACHING EFFECTS**

**"I was hungry and you formed a committee to investigate my hunger.**

**I was homeless and you filed a report on my plight. I was sick and you held a seminar on the situation of the underprivileged. You investigated all aspects of my plight and yet I am still hungry, homeless and sick."**—Author unknown.

**A**LTHOUGH world agencies have made numerous efforts to stop malnutrition, achievements have fallen short of hopes. For example, in 1996 the World Food Summit of the Food and Agriculture Organization of the United Nations (FAO) set the goal of reducing the number of the world's un-

dernourished by half—some 400 million people—by the year 2015.\*

Commendably, some progress has been made. But unfortunately, the FAO's recent report, *The State of Food Insecurity in the World*

\* For more information on the World Food Summit, see the August 8, 1997, issue of *Awake!* pages 12-14.

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\*Audio cassettes also available.

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2001, acknowledges: "Clearly, there has been a slowdown in the reduction of undernourished in the world." So the goal of the summit still seems out of reach. In fact, the report admits that "the number of undernourished has increased considerably in the majority of developing countries."

Why is this enemy so hard to defeat? To find an answer, we might first define malnutrition and then examine its far-reaching effects and its deep-rooted causes.

### What Causes Malnutrition?

Malnutrition is caused by a deficiency in the intake of nutrients by the cells of the body, and it is usually triggered by a combination of two factors: (1) an insufficient intake of proteins, calories, vitamins, and minerals and (2) frequent infections.

Such illnesses as diarrhea, measles, malaria, and respiratory diseases tax the body heavily and cause loss of nutrients. They reduce appetite and food intake, thus contributing to malnutrition. On the other hand, the undernourished child is more susceptible to infections. Thus forms a vicious circle that increases the mortality rates for protein-energy malnutrition (PEM).

Why are children at greater risk of suffering malnutrition? They are in a period of rapid growth that increases the demand for calories and proteins. For similar reasons, pregnant and nursing women are vulnerable to malnutrition.

Frequently, the baby's problem begins even before birth. If a mother is undernourished or malnourished before and during pregnancy, the baby will have a low birth weight. Then, early weaning, poor feeding habits, and lack of hygiene can bring on malnutrition.

Lack of necessary nutrients causes the child to stop growing and developing properly. It cries a lot and is prone to sickness. As the condition worsens, weight loss becomes more pronounced, eyes and fontanel (the soft spot on top of the head) become sunken, skin and

tissues lose elasticity, and the ability to maintain body temperature decreases.

Undernourishment can take other forms. These too can retard growth in children. For instance, an inadequate intake of minerals—mainly iron, iodine, and zinc—and of vitamins—particularly vitamin A—can have such an effect. The United Nations Children's Fund (UNICEF) notes that a deficiency of vitamin A affects about 100 million small children in the world and causes blindness. It also weakens the immune system, reducing the child's resistance to infections.

### Far-Reaching Effects

Malnutrition wreaks havoc on the body, particularly that of a child. Every organ and system—including the heart, kidneys, stomach, intestines, lungs, and brain—may be affected.

Various studies have shown that poor growth in a child is associated with impaired mental development and poor scholastic and intellectual performance. A report from the United Nations calls these effects the most serious long-term results of malnutrition.

For children who survive malnutrition, the aftermath can linger on into adulthood. That is why UNICEF lamented: "The depletion of human intelligence on such a scale—for reasons that are almost entirely preventable—is a profligate, even criminal, waste." So the long-term consequences of malnutrition are of great concern. Recent research relates undernourishment in infancy to a tendency toward such chronic illnesses in adulthood as heart disease, diabetes, and high blood pressure.

However, serious malnutrition is not the most extensive problem, as UNICEF acknowledges: "More than three quarters of all [the] malnutrition-assisted deaths are linked not to severe malnutrition but to *mild* and *moderate* forms." (Italics ours.) Children who suffer from mild or moderate malnutrition may face long-term health repercussions. It is therefore vital that symptoms of undernourishment in children be identified so that proper treatment can be provided.—See the box on page 7.

## IS YOUR CHILD MALNOURISHED?

How do health professionals evaluate the nutritional health of a child? They may analyze various signs and symptoms, ask questions about eating habits, and order a laboratory analysis to be made. However, they most commonly rely on fairly straightforward measurements. They measure the child's body and compare the figures to reference standards. That helps them determine the type and seriousness of the malnutrition.

The most important measurements are weight, height, and the perimeter of the arm. Comparing weight and age reveals the degree of the undernourishment; if it is serious, the child is wasted and looks very thin. The illness is considered serious if the child's weight is more than 40 percent below normal, moderate if it is 25 to 40 percent below, and mild if it is 10 to 25 percent below. A very low height-to-age ratio may reveal

chronic undernourishment—the child is stunted.

The most serious forms of protein-energy malnutrition (PEM) are marasmus, kwashiorkor, and a combination of both. Marasmus (progressive wasting) appears in nursing babies between 6 and 18 months of age. It establishes itself slowly as a chronic deficiency of calories and nutrients and develops as a result of insufficient nursing or the use of very diluted substitutes for human milk. The baby shows a great loss in weight, the muscles are so thin that the skin sticks to the bones, and growth is retarded. The baby also has "an old person's face," is irritable, and cries a lot.

The term kwashiorkor, taken from an African dialect, means "deposed child." It refers to a child's being replaced at the mother's breast by a newborn sibling. This condition appears

after weaning, and while it includes caloric deficiency, it develops from an acute lack of proteins. It causes the body to retain fluids, making the child appear bloated in the extremities and the abdomen. Sometimes it affects the face too, making it resemble a full moon. Skin lesions and alterations in the color and texture of the hair appear. Children with this condition show swelling of the liver and are apathetic and sad. This was the case with Erik, mentioned previously, whose mother fed him breast milk for only the first month of his life; then she gave him very diluted cow's milk. At three months he was given vegetable soups and sugar water and was left in the care of a neighbor.

The third type of PEM includes characteristics of both marasmus and kwashiorkor. All of these conditions can prove fatal if not treated in time.

*Children eating bulgur and vegetables at a school in Bhutan*



FAO photo/WFP Photo: F. Mattioli

### Deep-Rooted Causes

As noted before, the direct cause of malnutrition is a lack of food. But there are deeper social, economic, cultural, and environmental causes. Principal among them is *poverty*, which affects millions of people, particularly in de-

veloping countries. However, in addition to being a cause, poverty is also a consequence, as undernourishment weakens people's productivity, thus intensifying poverty.

There are other contributing factors. *Lack of knowledge* breeds poor eating habits. *Infections*,

## PROTECT YOUR CHILD FROM MALNUTRITION!

■ It is essential to improve the diet of the mother. Pregnant and nursing women need to consume more calories and proteins. Proteins in particular help in the production of mother's milk. So when there is little food, give preference to women of childbearing age and to little children.

■ In almost all cases, the best possible food for a baby is its mother's milk. This is especially so during the first days after birth because mother's milk contains antibodies that protect the baby from infection. During the first four months or so, breast milk provides all the nutrients that the baby needs in order to grow and develop properly.

■ Although mother's milk continues to be the main food, between the fourth month and the sixth, the baby is ready to receive other foods. Gradually introduce fruits and vegetables in a mashed form. Let the baby try one new food at a time. Two or three days later, after it is familiar with that food, let it taste another. Of course, patience and many attempts are often needed before the baby accepts a new food. When preparing such food, re-

member that everything should be clean, clean, clean! Wash foods and utensils well!

■ Between the fifth and ninth months of life, babies generally start to need more calories and proteins than milk provides. Continually and persistently introduce other foods. Cereal and vegetable baby food may come first, meat and dairy products later. Whereas the earliest foods are strained, from the baby's sixth month on, they may be finely chopped. Adding salt or

*Experts agree that mother's milk is almost always the best food for a newborn*



© Caroline Penn/Panos Pictures

sugar is neither necessary nor recommended.

■ After eight months, mother's milk is no longer the basis of the baby's diet but, rather, a complement. The baby begins to eat the food that the family eats. The food should be kept scrupulously clean, and it should be finely chopped so that it is easier to chew. The ideal diet includes fruits and vegetables, cereals and legumes, and meat and dairy products.\* In particular, children need foods rich in vitamin A. Some examples are breast milk, dark-green leafy vegetables, and such orange or yellow fruits and vegetables as mangoes, carrots, and papayas. Children under three years of age need to eat five or six times a day.

■ The greatest possible variety of foods in different combinations provides nutrients that protect your baby. The mother should focus on providing the child with good-quality food, neither forcing the child to eat after it is full nor withholding food from the child when it appears to want more.

\* You will find more information in the article "Nutritious Foods Within Your Reach," in the May 8, 2002, issue of *Awake!*

as we have seen, play a role. There are also social and cultural causes, such as the *unequal distribution of food* and *discrimination against women*. Women often eat "last and least"—that is, after men and less than men. Women are also denied educational opportunities that would help them to care for their children better.

In addition, *environmental factors* cause a decrease in food production. Among these are natural disasters and wars. According to *The State of Food Insecurity in the World 2001*, from October 1999 to June 2001 alone, 22 countries were affected by drought, 17 by hurricanes or floods, 14 by civil war or strife, 3 by extremely cold winters, and 2 by earthquakes.

#### Treatment and Prevention

How can a child be treated for malnutrition? If the child suffers from serious undernourishment, hospitalization may be best for initial treatment. According to a manual for physicians published by the World Health Organization, the doctors will evaluate the child's condition and treat any infections or dehydration. Feeding may begin gradually, often starting with a tube. This initial phase may take as long as a week.

A rehabilitation phase follows. The child is reintroduced to mother's milk and is encouraged to eat as much as possible. Emotional and physical stimulation are important during this phase. Care and affection can do a surprising amount of good for the child's development. This is when the mother may be given education on how to care for her child with a proper diet and hygiene, so as to avoid a relapse. Then the child is released from the hospital. It is important that the child be taken to the hospital or clinic for follow-up visits.

Clearly, however, prevention is the best course. That is why in many countries, government and private organizations have established food supplementation programs or programs to fortify foods for general con-

FAO photo

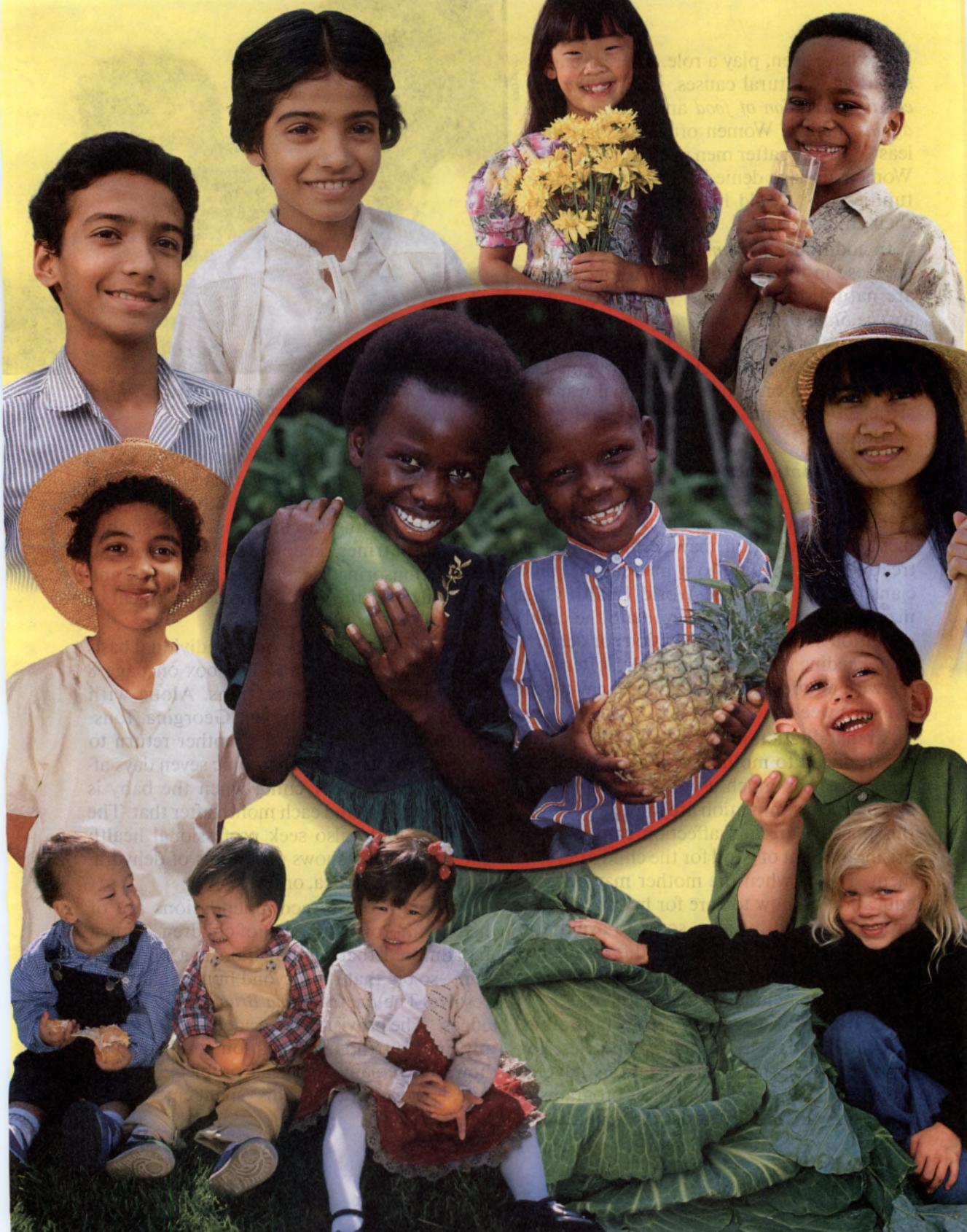


**You can take steps to improve  
the diet of your child**

sumption. Communities also contribute to the prevention of malnutrition in many ways, such as by providing nutritional education programs, protecting the drinking water supply, building latrines, keeping the surroundings clean, sponsoring vaccination campaigns, and watching over the growth and development of children.

But what can be done on an individual basis to prevent malnutrition? The box on page 8 has some helpful suggestions. Along with these, pediatric nutritionist Georgina Tous-saint recommends that the mother return to her pediatrician or health clinic seven days after the birth of her child, when the baby is one month old, and each month after that. The mother should also seek professional health care if the baby shows symptoms of dehydration, severe diarrhea, or fever.

Although these recommendations are of help in improving the diet of children, it must be admitted that malnutrition is a big problem—so big that it is beyond human efforts to resolve. The *Encyclopædia Britannica* acknowledges: "The provision of an adequate food supply and nutritional education to all people, however, remains a crucial problem." Therefore, is there hope that this "silent emergency" will ever end?



# **“THE SILENT EMERGENCY SOON TO END!”**

**C**OMPARED with the relatively recent past, we live today in a world of abundance. . . . There is more than enough food for all . . . theoretically.” So says a study by the World Health Organization (WHO). If that is the case, what is the real problem that causes malnutrition?

“The problem is that food is neither produced nor distributed equitably,” says WHO. “All too frequently, the poor in fertile developing countries stand by watching with empty hands—and empty stomachs—while ample harvests and bumper crops are exported for hard cash. Short-term profits for a few, long-term losses for many.” A recent study by the Food and Agriculture Organization of the United Nations (FAO) shows that ‘the richest fifth of the people’ on the planet ‘eat 45 percent of all the meat and fish; the poorest fifth get just 5 percent.’

On the other hand, “a lack of access to good education and correct information is also a cause of malnutrition,” says the United Nations Children’s Fund, adding: “Without infor-

ation, the ability to use available food resources effectively is lost. . . . Even if countries have the best intentions and good opportunities to combat malnutrition, the lack of basic information strategies and better and more accessible education programmes, the awareness, skills and behaviours needed to combat malnutrition cannot be developed.” But lack of food, in turn, diminishes a person’s health and ability to get a better education—yet another vicious circle.

## **Justice and Unselfish Interest in Others**

Despite such frustrating obstacles, some experts in this field are still optimistic. For instance, the director general of the FAO, Jacques Diouf, expressed this hope: “I have a vision of a world where every man, woman and child has enough nutritious and safe food, every single day. In my vision, the shocking extremes of wealth and poverty are reduced. I see tolerance and not discrimination; peace and not civil strife; sustainable habitats and not environmental degradation; general prosperity and not debilitating hopelessness.”

As we have seen, though, it will take more than increased production and distribution of food to realize such hopes. Widespread justice and unselfish interest in others are needed.

**“Eliminating hunger and malnutrition is technically feasible.**

**The means are there. The challenge lies in . . . taking concerted actions nationally and internationally.”—World Health Organization**

But these noble traits are not typical of modern commercialism.

Is it possible to eliminate such huge obstacles as greed, poverty, strife, and selfishness and thus rid the earth of malnutrition? Or is this an impossible dream?

### The Only Real Solution

According to the Bible, we should not be surprised at the underlying problems that lead to malnutrition. God's Word states: "In the last days critical times hard to deal with will be here. For men will be lovers of themselves, lovers of money, . . . having no natural affection, not open to any agreement, . . . without love of goodness, . . . having a form of godly devotion but proving false to its power." —2 Timothy 3:1-5.

Can mankind eradicate such deeply ingrained attitudes without God's help? It doesn't seem likely, does it? Perhaps you have noted that sometimes people in authority have good intentions regarding the social problems of mankind, but selfishness, love of money, and imperfection on the part of others interfere with and paralyze even the most honest endeavors.—Jeremiah 10:23.

Yet, the solution is not an impossible dream. The Bible promises that the Kingdom of God will put an end to the problem of injustice as well as to all other afflictions that plague mankind today.

Isaiah 9:6-7 offers us this magnificent hope: "There has been a child born to us, there has been a son given to us; and the princely rule will come to be upon his shoulder. And

his name will be called Wonderful Counselor, Mighty God, Eternal Father, Prince of Peace. To the abundance of the princely rule and to peace there will be no end, upon the throne of David and upon his kingdom in order to establish it firmly and to sustain it by means of justice and by means of righteousness, from now on and to time indefinite. The very zeal of Jehovah of armies will do this."

It is this same Kingdom that people pray for when they recite the Lord's Prayer and say to God, "Let your kingdom come." (Matthew 6:9, 10) Note that Isaiah mentions that "the very zeal of Jehovah of armies will do this." Yes, Jehovah God has always been keenly interested in providing for the needs of humans. He has designed this earth to produce ample food for all.

Psalm 65:9-13 says of him: "You have turned your attention to the earth, that you may give it abundance; you enrich it very much. The stream from God is full of water. You prepare their grain, for that is the way you prepare the earth. There is a drenching of its furrows, a leveling off of its clods; with copious showers you soften it; you bless its very sprouts. . . . The pastures have become clothed with flocks, and the low plains themselves are enveloped with grain."

Yes, the Creator, Jehovah, is the best provider for mankind. He is "the One giving food to all flesh: for his loving-kindness is to time indefinite."—Psalm 136:25.

We can be confident that God's Kingdom under Christ will take care of all people. "There will come to be plenty of grain on the earth; on the top of the mountains there will be an overflow," as the Bible says. But there will also be an equitable distribution, for "[Jesus Christ] will deliver the poor one crying for help, also the afflicted one and whoever has no helper. . . . The souls of the poor ones he will save." (Psalm 72:12, 13, 16) So take courage! This "silent emergency" is about to be resolved once and for all.

## In Our Next Issue

- Life's Amazing Senses  
—Do You Appreciate Them?
- Are Your Shoes Really Comfortable?
- How Should We Use Our Freedom of Choice?



# DISPLAYING LOVE IN TIMES OF TROUBLE

BY AWAKE! WRITER IN NIGERIA

**S**UNDAY, January 27, 2002, was called Black Sunday in Lagos, Nigeria. An explosion in an underground armory sent violent tremors throughout the city and lit up the evening sky. For several hours explosions rained shells and debris over a radius of two miles, causing panic in the city.

Wild rumors fueled fear. Throngs of terror-stricken people poured onto the streets, not knowing what they were fleeing or where they were heading. In the evening darkness, hundreds of people, including many hysterical children, ran into the murky waters of a canal and drowned. Houses, schools, and business establishments were destroyed or severely damaged, rendering thousands homeless and jobless. An estimated 1,000 people lost their lives in the tragedy. Later estimates were even higher.

Some 1,350 unexploded bombs, rockets, and hand grenades were later recovered from residential areas around the military installation where the explosions had taken place. One man found a metal object inside his living room. Not realizing it was a bomb, he picked it up, put it in the trunk of his car, and returned it to the authorities.

Upon hearing news of the explosions, the Nigeria branch office of Jehovah's Witnesses immediately contacted an elder in Lagos and directed the 16 traveling overseers in the area to evaluate the situation of the 36,000 Witnesses in Lagos. One million naira (about \$10,000 U.S.) was sent by the branch, along with instructions to form a relief committee to administer aid.



**A truck loaded  
with relief  
materials**

**Some who  
were helped**



Among the Witnesses, one man was seriously injured by shrapnel; tragically, two young women lost their lives; and two Kingdom Halls and the homes of 45 families suffered damage.

Six days after the munitions explosions, on February 2, 2002, an ethnic feud broke out in a different area of the city. According to the Red Cross, the fighting left 100 people dead, 430 injured, and 3,000 displaced, as well as 50 houses burned. The relief committee that had been caring for the needs of the "Black Sunday" victims quickly sought out their Christian brothers in this area.

None of the Witnesses lost their lives at this time, as most of them were away attending a circuit assembly when the fighting started. However, many members of the five congregations in the area did not have homes to return to. Readily, their Christian brothers took them in. One Witness doctor and his wife provided lodging for 27 displaced persons.

The Witnesses in Lagos who were unaffected by the blasts and the ethnic fighting generously contributed food, clothing, and household items. The city overseer reported: "What is being contributed by the brothers in the Lagos area is far more than what is needed by those affected." The branch office had to write to the congregations asking them to hold off from making further contributions. Three truckloads of leftover items were sent to the branch office for storage.

Congregation elders visited many victims and the family members of those who had



**This couple provided lodging for 27 displaced persons**

died. They endeavored to give Scriptural comfort. The relief committee organized repairs on the homes that had been damaged. They supplied victims of both disasters with household items, clothing, and foodstuffs and assisted the displaced to secure accommodations. A total of 90 families and individuals were assisted by the committee.

Many victims were overwhelmed by the help that they received. One Witness exclaimed to the relief committee: "As long as I am alive, I will make Jehovah my 'refuge and strength'!"—Psalm 46:1, 2.

Non-Witnesses observed the way Jehovah's Witnesses cared for one another during these crises. An uncle of one of the deceased Witnesses told the elders of the congregation she was in: "I will come back to really thank you and to learn more." To his family he said: "What I saw in Lagos was wonderful. Even relatives did not do what these people did."



**Witnesses working on a damaged home**

# The Great Migration

BY AWAKE! WRITER IN KENYA

**T**HE earth thunders with the sound of a million pounding hooves. The mass of heaving bodies surges forward, kicking up a billowing cloud of red dust. The animals gallop on spindly legs as the herd moves past rolling valleys and hills, crosses open grasslands, and traverses rivers and streams. They advance in a great wave, leaving behind huge swaths of grass cropped down to the roots. This vast herd of bellowing, stampeding creatures makes up one of the greatest natural wildlife spectacles on earth—the great migration of wildebeests.

## Africa's Garden of Eden

The Serengeti is a wild land. Located in the countries of Tanzania and Kenya, it is an immense, rolling grassland encompassing an area of some 11,500 square miles. Here the earth is covered with a layer of rich volcanic soil, creating ideal conditions for the lush grasses that carpet the land. There are areas of acacia woodland and

thorn tree savanna that supply foliage for browsing families of elephants. Herds of giraffes gracefully move across the savanna in long, slow strides.

In some areas granite outcrops, worn smooth by wind and rain, rise up from the plains and provide ideal lookouts for lions and leopards. Swift-flowing rivers that wind their way through the land are teeming with hippos and crocodiles. Out on the open plains, herds of wildebeests, hartebeests, topis, and many other types of antelopes can be seen grazing. Thirsty zebras gather at water holes, circling them like necklaces of white-and-black beads. Gazelles and impalas bound effortlessly across the plains in great arching leaps. Large herds of cape buffalo, with their massive curved horns and muscular bodies, graze slowly, pulling up tufts of grass with their wide muzzles.

Prides of lions are abundant in the Serengeti. During the heat of the day, they laze in the shade of trees and bushes, waiting for the cool of evening to hunt. Spotted leopards are nearly invisible where they lie, draped elegantly over the upper boughs of trees, camouflaged by the dappled light under the foliage. The cheetah finds the open grasslands ideal footing for its lightning-quick sprints. Its lean

body blurs as it races across the plains in pursuit of prey.

Indeed, the Serengeti ecosystem provides a paradise of animal life that is a marvel to behold. But it is the vast herds of wildebeests that produce one of the greatest natural wonders in the animal world.

### The Clown of the Plains

An estimated 1.5 million wildebeests roam the Serengeti. This is an odd-looking creature, with a long head and glossy eyes, which are located far apart and high up on the skull. Its cowlike horns curve slightly downward and outward and then hook upward. Its back slopes down toward hindquarters that appear weak and out of proportion to the animal's strong shoulders and neck. Thin, spindly legs support the weight of the wildebeest's heavy body. With a long whitish beard under the chin, a dark mane on the neck, and a tail like that of a horse, the wildebeest resembles a combination of several different animals.

The antics of wildebeests are often clownish and entertaining. When gathered in large herds, they



produce a noisy bellowing sound that resembles a chorus of thousands of frogs. Standing on the open plains, they seem to wear a bewildered, surprised look as they stare out at the world around them.

At times, a wildebeest bull will race across the plains, prancing sideways and running in circles. Tossing his head, he bucks and bounces on stiff legs, kicking up dust in a comical manner. Some say that these actions are intended to impress females or to warn other males with a show of prowess. Sometimes, though, the bull just appears to be feeling frisky.

### Born Into a Hostile World

When the time is right, the wildebeests begin giving birth. They have the unique ability to synchronize the birth of their young, dropping 80 to 90 percent of their calves within a three-week period. During this time the herd swells with thousands of bleating baby wildebeests. Each mother must quickly bond with her calf, for if the herd stampedes, the mother and her calf could easily become separated, and the calf would have little chance of survival on its own.



The young are born into a hostile world of ever-watchful predators. Females wait until there are no signs of danger before giving birth. However, if surprised by a predator, they have the incredible ability to interrupt the birth process and run away. Then, at a later time when no danger threatens, they are able to complete the birth of their calf.

The calf itself seems to have an inborn sense of danger and is on its feet within a few minutes of birth. After a week, the youngster will be able to gallop across the plains at 30 miles per hour.

### A Time to Move

Wildebeests migrate in great herds across the Serengeti. The key to their mass movement is the rain. The rainfall is governed by weather patterns that move in annual cycles. Throughout the year it is usually raining somewhere within the bounds of this vast grassland.

Wildebeests need water daily and must have a constant supply of grass to feed on. As long as food and water are available, they stay put. But as the dry season progresses, the grass on the plains



begins to dry up and water sources disappear. The herds of wildebeests cannot wait for the rains to come to them. They must follow the rain.

Wherever the rain falls, the dry plains are quickly transformed. Within a few days, green sprouts push up through the soil and produce a green flush of grass. These tender blades are full of nutrition and moisture—a powerful attraction for wildebeests.

These creatures have an ability to detect rainfall, even at great distances. No one is sure how they know that it is raining in another part of the Serengeti—whether it is by seeing the billowing thunderheads towering in the distance or by smelling the moisture in the dry air. At any rate, to survive, the herds must move. And move they do!

### A Perilous Journey

In the beginning the departure is gradual. Wildebeests are gregarious creatures; when one animal starts to walk in a certain direction, others around it stop grazing and try to follow. Soon the whole herd is surging forward in a dramatic exodus. Pushed by thirst and hunger, they move onward. Sometimes they run. At other times they plod along in drawn-out lines, creating deep ruts in the dusty soil.

Their journey is fraught with danger. Predators follow the immense herds of ungulates, keeping a keen eye on any animal that is slow-footed, lame, or sick. As the wildebeests advance, they enter the territories of lion prides, which wait in ambush. Hiding in the long grass, the big cats rush into the mass of grazing animals, causing them to scatter in panic. Leopards, cheetahs, wild dogs, and hyenas all take advantage of any animals that fall behind or drift away from the main herd. When a kill is made, vultures appear. Squabbling and fighting over the remains, they leave nothing behind but a frame of bones, which bleach white in the hot African sun.

Swift-flowing rivers create formidable barriers that the herd must cross. River crossings are spec-

tacular events, with thousands of animals plunging from high banks into the water below. Most make it safely to the opposite side. Others are carried away by the current or are taken by the crocodiles that wait just below the surface of the water. This perilous journey is undertaken yearly. When completed, it may cover a distance of some 2,000 miles.

### Man—The Greatest Predator

For thousands of years, man had little impact on the migration of the wildebeests. Now man poses the biggest threat to this spectacle. In recent decades the governments of Tanzania and Kenya have endeavored to protect the animals of the Serengeti. Yet, even though the wildebeest migration takes place largely within the protected borders of wildlife sanctuaries, thousands of the animals are illegally trapped and killed by poachers. Armed with wire snares, poison arrows, and guns, they hunt animals to supply game meat and trophies to eager buyers. An army of game wardens and rangers patrol the protected areas, but the Serengeti is so large that it is almost impossible to protect it fully. As human populations grow, the pressure to encroach on these fertile grasslands increases. The setting aside of large tracts of land for wildlife is a bitter issue that is constantly debated.

At one time millions of bison roamed the plains of North America. Now they are gone. Some fear that the same fate awaits the last great herds of wildebeests in East Africa. It would be a sad day if we were to witness the disappearance of such an awesome natural wonder. We long for the day when under God's righteous rule, man and animals will live in perfect balance and harmony. (Isaiah 11:6-9) In the meantime, we will continue to be awed by this spectacular event—the great migration of wildebeests.

**Herds must cross  
swift-flowing rivers**



## Young People Ask . . .

### Should I Watch Music Videos?

**"Music videos are great. Some of them are like mini-movies. They tell a story, and I admire the choreography."**

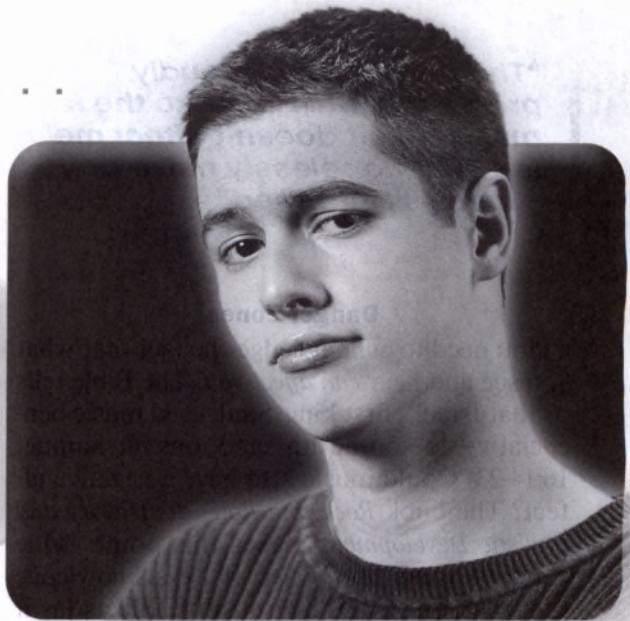
—Casey.

**"They're a good way to find new music. They expose you to more than the regular top-40 music. Also, music videos can be good conversation pieces."** —Josh.

**"Details in a video are important to me—who is singing, what she's wearing, how she acts. All these combine to shed light on the meaning of the lyrics."** —Kimberly.

**"I like to see what my favorite bands are going to do this time. I love the special effects. And some videos are funny. But you have to be careful."**

—Sam.



**P**ERHAPS you too enjoy watching music videos. When they first appeared on the television scene, they were relatively simple low-budget productions. But as music videos proved that they were no passing fad and that they had an enormous impact on record sales, they rapidly became increasingly sophisticated, artistically and technically. Today they are an important part of the music world and have proved to be immensely popular among young people. In some lands there are TV stations devoted exclusively to the showing of music videos!

But why do youths such as Sam, who is quoted here, say that there is a need to be careful? Could it be that some music videos might have a negative effect on you—perhaps corrupting your thinking and moral values or even damaging your relationship with your Creator? Such a question may seem a bit extreme. But think, If you were going for a swim in a lake or in the ocean and saw signs proclaiming that it was hazardous or dangerous to swim there, would it be smart to brush off such warnings? Hardly. Well, then, it will prove wise on your part to consider some warnings regarding music videos.

**"The person who proudly proclaims 'Oh, I listen to the music, but it doesn't affect me' is either hopelessly naive or grossly ill informed"**

### Danger Zones

You need to acknowledge the fact that what you see and hear *can affect you!* The Bible tells us that Israel's first king, Saul, used music beneficially—to soothe his emotions. (1 Samuel 16:14-23) Could music also have a negative effect? The book *Rock and Roll—Its History and Stylistic Development* makes this point: "One cannot have it both ways. If we acknowledge that rock music has had positive effects (as it has), we must also be willing to admit that it has had negative effects (as it has). The person who proudly proclaims 'Oh, I listen to the music, but it doesn't affect me' is either hopelessly naive or grossly ill informed."

The Bible repeatedly points to the influence that the eye has on our thinking and emotions. (Proverbs 27:20; 1 John 2:16) So by adding powerful visual elements to music, video producers dramatically increase the effects that music has on its listeners. What kinds of visual elements are commonly used?

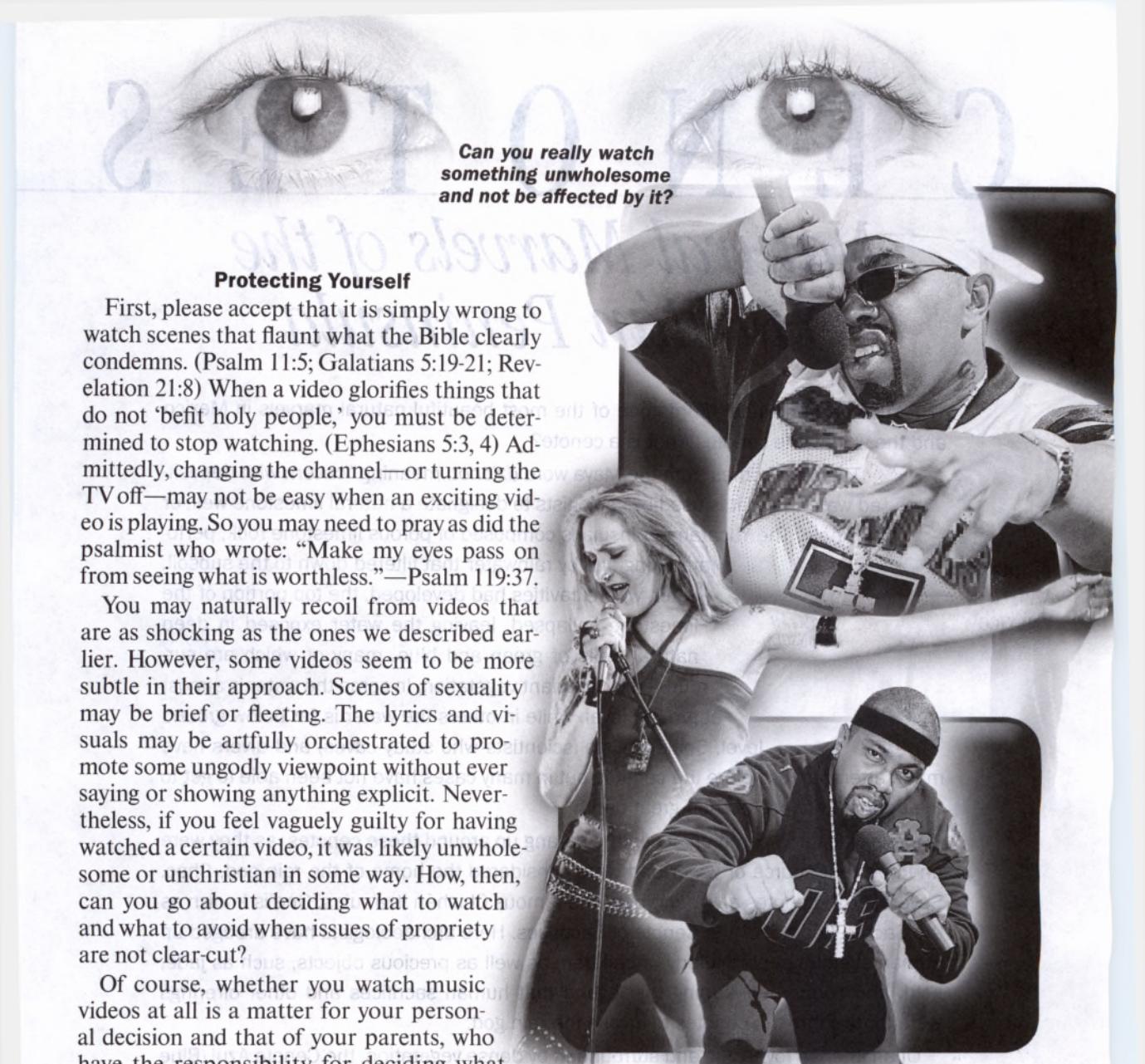
According to one study, about 57 percent of rock videos contain violent acts. About 76 percent include representations of sexual activities. Another recent analysis found that 75 percent of concept videos (videos that tell a story) also involved sexual imagery, and more than half involved violence, usually against women. Now, could watching such videos really harm you? One reference points out that "experimental studies have found that viewing music videos may, in fact, influence adolescents' attitudes concerning early or risky sexual activity." And there is no denying that as musicians try to outshock their predecessors and their peers, music videos in general are becoming increasingly graphic.

One expert in the field of education observed: "Many argue that what they hear—and see, thanks to music videos—is no different than the musical influences of past generations . . . But it seems that the majority of today's artists cavalierly embrace profanity and outrageousness as acceptable tools to increase record sales." And *Chicago* magazine says of those who watch a certain music video channel: "What they get is a nonstop blitz of aggressively suggestive soft-core porn."

*Chicago* magazine also describes a music video in which "a young man sitting at the counter in a diner leans his head back a little too far. A huge bloodred gash appears in his neck and the head falls off." Another video reportedly showed a man doing a gory striptease, during which he also removed his flesh and muscles. Other things too shocking to report were depicted.

Now some may dismiss these facts, claiming that the videos described here are extreme and that most are not really so bad. Some may even argue that *they* don't find music videos to be particularly shocking or offensive. But might that not simply suggest that repeated viewing of such videos has desensitized those individuals? Casey, the young man quoted at the outset, admits: "If you don't put limits on what you watch, what was at first outrageous eventually becomes mundane. Unconsciously, you look to the next level and passively accept what you used to find shocking."

What may result? Your ability to make sound moral decisions may be severely impaired. Because our minds can so easily be influenced in a negative way, the Bible exhorts us to "safeguard practical wisdom and thinking ability." (Proverbs 3:21; 5:2) Another negative result could be damage to your friendship with Jehovah God. Is that not your most precious possession? You therefore need to safeguard that friendship by taking measures to avoid improper entertainment of any kind. How can you do so?



**Can you really watch something unwholesome and not be affected by it?**

### Protecting Yourself

First, please accept that it is simply wrong to watch scenes that flaunt what the Bible clearly condemns. (Psalm 11:5; Galatians 5:19-21; Revelation 21:8) When a video glorifies things that do not ‘befit holy people,’ you must be determined to stop watching. (Ephesians 5:3, 4) Admittedly, changing the channel—or turning the TV off—may not be easy when an exciting video is playing. So you may need to pray as did the psalmist who wrote: “Make my eyes pass on from seeing what is worthless.”—Psalm 119:37.

You may naturally recoil from videos that are as shocking as the ones we described earlier. However, some videos seem to be more subtle in their approach. Scenes of sexuality may be brief or fleeting. The lyrics and visuals may be artfully orchestrated to promote some ungodly viewpoint without ever saying or showing anything explicit. Nevertheless, if you feel vaguely guilty for having watched a certain video, it was likely unwholesome or unchristian in some way. How, then, can you go about deciding what to watch and what to avoid when issues of propriety are not clear-cut?

Of course, whether you watch music videos at all is a matter for your personal decision and that of your parents, who have the responsibility for deciding what you can and cannot watch. (Ephesians 6:1, 2) But if your parents allow you to watch music videos, you need to be guided by more than what feels right to you. Hebrews 5:14 encourages us to ‘train our perceptive powers’ to ‘distinguish right and wrong.’ Our powers of perception are trained by studying Bible principles, which provide a structure for determining what is good and what is bad from Je-

vah’s viewpoint. By meditating on such Bible principles, you will be able to recognize what is hazardous to your spiritual health, even when there is no particular Bible rule to guide you.

Specifically, then, what Bible principles can guide you in regard to watching music videos? This will be discussed in a future article.

# CENOTES

## *Natural Marvels of the Yucatán Peninsula*

THE Yucatán Peninsula affords one of the most beautiful natural marvels in Mexico and the world—the cenote. What is a cenote?

The term comes from the Maya word *dz'onot*, meaning “cavern with deposited water,” and it is used by geologists to designate a natural limestone well, or sinkhole. The Yucatán Peninsula is composed of porous limestone rock, perforated long ago by rainwater that filtered down to the subsoil.

Later, where cavities had developed, the top portion of the limestone collapsed, leaving the water exposed in deep natural wells of green and blue, many of which are surrounded by luxuriant vegetation. In some the water is almost at ground level, while in others the water is far below ground

level. Speleologists (scientists who study caves) and divers have made attempts to explore the cenotes but in many cases have not been able to get to the bottom because of their great depth.

Maya cities and ceremonial centers sprang up around these cenotes, as they were an important source of water and were considered the home of the rain god, Chac. Several such cenotes are found near the famous Chichén Itzá ruins. One is known as the Sacred Cenote, or the Cenote of Sacrifices. Here archaeologists have dredged up human skeletons (particularly of children) as well as precious objects, such as jade, gold, and copper, confirming the legend that human sacrifices and other offerings were thrown into the cenotes to invoke the rain god.

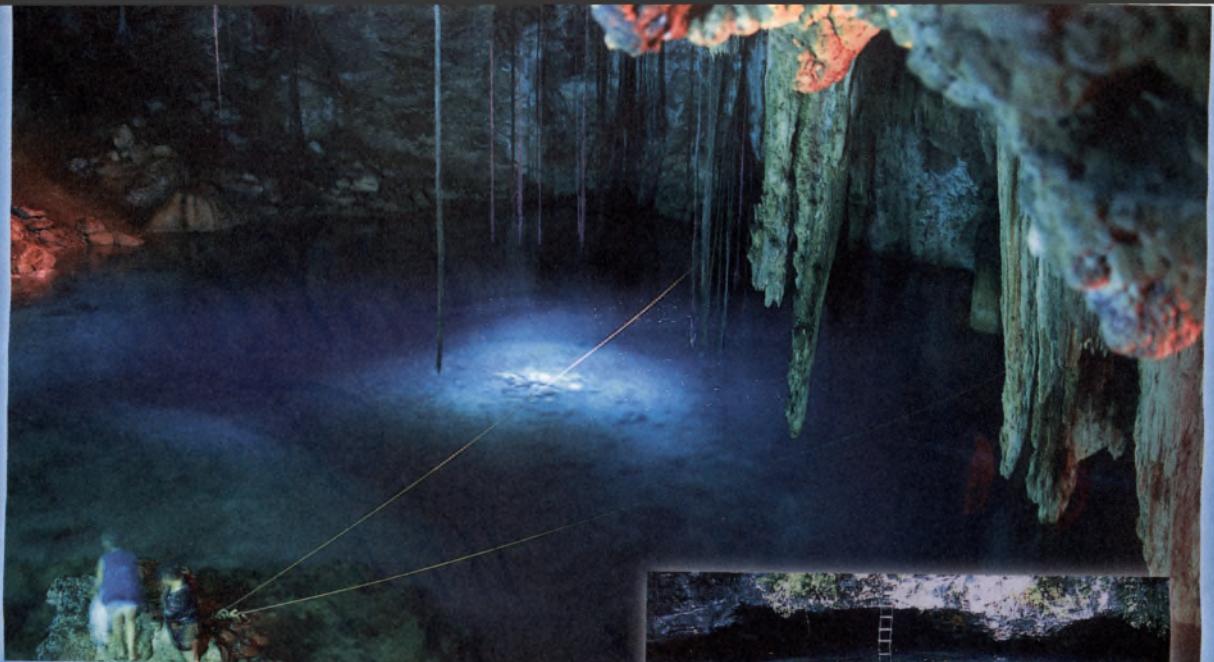
Of an intense royal blue and surrounded by dense vegetation, the Cenote Azul (Blue Cenote) near Chetumal, Quintana Roo, is one of the most visited. This sheer-walled cenote is between 700 and 1,000 feet across, is estimated to be about 300 feet deep, and connects with the many-hued Bacalar Lagoon through subterranean channels. Swimming in these pristine cenote waters is an unforgettable experience.

In addition to Mexico, similar sinkholes are found in Australia, Cuba, Turkey, and parts of Europe. But on the Yucatán Peninsula, hundreds have been discovered, while outside this region, they are a rare phenomenon. You are invited to visit a cenote to enjoy firsthand this natural marvel.

BY AWAKE!  
WRITER IN  
MEXICO

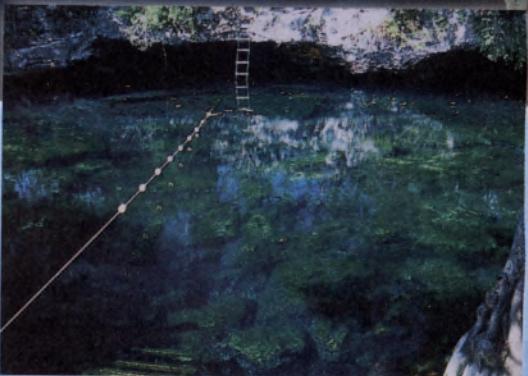
YUCATÁN  
PENINSULA

Birds  
Bugs  
Butterflies  
Caves  
Dinosaurs  
Fossils  
Gardens  
Insects  
Landmarks  
Mammals  
Monarchs  
Mountains  
Oceans  
Plants  
Rivers  
Sea life  
Shells  
Volcanoes



**Cenote X-Keken, Yucatán**

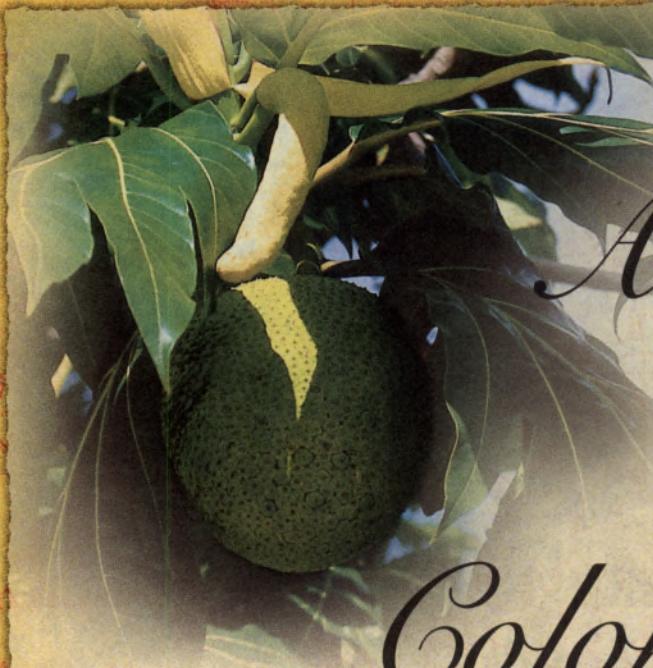
**Crystal Cenote,  
Quintana Roo**



**Bacalar Lagoon and Cenote Azul (below)**

© Michael Friedel-Woodfin Camp and Associates





# A Golden Fruit With a Colorful Past

BY AWAKE! WRITER IN FIJI

THE year is 1789. The 23-foot open boat is tiny in the vast ocean and loaded with men. Its passengers are weakened by hunger and exhausted because they have been bailing for days while battling mountainous seas and high winds. Ahead lies an expanse of more than 3,000 miles of uncharted ocean, studded with treacherous coral reefs. Food supplies are scanty—each man is rationed only one ounce of bread (ship's biscuit) per day along with a little water. The men's chances of survival seem small indeed.

**Painting by Robert Dodd depicting the mutiny on the "Bounty"**

National Library of Australia, Canberra, Australia/Bridgeman Art Library

Within the space of a little more than a week, they had suffered mutiny at sea, they had been set adrift, and one of their number had been killed in an attack by natives. They had also faced fierce thunderstorms and had barely succeeded in outrunning canoes that





## A Tree That Bears Many Gifts

The mature breadfruit tree is a spectacular evergreen. It originated in the forests of Malaysia. As a member of the family Moraceae, it is a relative of the fig, mulberry, and jackfruit trees. When mature, it may grow to a height of 40 feet, and it puts out suckers that can be cut and planted. The breadfruit tree produces distinct male and female flowers in separate clusters. These flowers, which in the wild depend on small fruit-eating bats for their pollination and seed dissemination, develop into large round or oval fruits, about the size of a

small melon, green outside and cream to golden yellow inside.

The breadfruit tree also produces very large, glossy, dark-green leaves, which provide welcome shade from the hot tropical sun. Its soft, lightweight wood is used for making furniture and canoes, while the inner bark is sometimes used to make a kind of cloth known throughout the Pacific as tapa. The milky sap is used as a waterproofing compound, and in some places the latex has been used to plaster bone fractures and even as a glue to capture birds.

gave chase from the islands then known as the Cannibal Isles.

What had drawn these men to this remote and dangerous part of the South Pacific, so far from their homes in England, a land of well-ordered groves and gardens? The object of their quest involved the noble breadfruit tree. Let us explain how this beautiful tree and its nourishing fruit played a key role in this story and in earlier epic voyages of discovery.

Perhaps you have identified the men in the boat in the above-mentioned account as the survivors of the infamous mutiny on the *Bounty*. The 215-ton British naval ship *Bounty*, under Captain William Bligh, had set sail from England bound for Tahiti. On arrival Bligh was to take on board a company of very unusual "passengers"—close to 1,000 breadfruit tree saplings. These potted plants

had the potential of paying for their passage by producing nourishing golden fruit once they were established in their new home in the British colonies of the Caribbean.

This project was arranged on the basis of advice that Sir Joseph Banks had given to the British



government, which at the time was urgently seeking a new food source for slaves working in the cane fields. Banks, then acting as an adviser to the Kew Botanical Gardens near London, England, had previously sailed as botanist with Captain James Cook on his earlier voyage of discovery in the Pacific.\* Both he and Cook had foreseen promising possibilities for the breadfruit tree.

Although not personally accompanying Bligh, Banks drew up plans for the on-board care of the plants during the long sea voyage, giving particular thought to their need for fresh water. Some writers believe that the attention and water lavished on the trees—at the expense of the crew—may have helped to drive the already dissatisfied crew to mutiny. Off the coast of Tonga, early on the morning of April 28, 1789, Bligh and 18 loyal men were set adrift at the point of a cutlass. The breadfruit "passengers" were probably cast overboard, consigned to a watery grave by gleeful mutineers.

\* See the article entitled "Kew Gardens—Transplant Center for the World," appearing in the *Awake!* of January 8, 1989.

Bligh, however, was not a man easily deterred. He embarked on what has been called "the most celebrated open-boat voyage in the chronicles of the sea." In seven trying weeks, he sailed this small boat more than 3,600 miles, northwest through the middle of the islands now known as Fiji, up the east coast of New Holland (Australia), and on to safety on the island of Timor.

On his return to England, Bligh was given command of two more ships, whereupon he returned to Tahiti to collect breadfruit trees. This time, in the year 1792, he successfully

**Breadfruit can be prepared  
in many different ways**



transported some 700 potted "passengers" to the islands of St. Vincent and Jamaica in the West Indies. To this day, breadfruit trees flourish there—producing a crop of gold, as it were, beneath their verdant, leafy crowns.

While Bligh's voyage is surely an epic tale of survival and discovery, it is but a recent chapter in the breadfruit story. If the breadfruit tree could only speak, what stories it would tell of a time thousands of years ago when it accompanied ancient mariners on great voyages of discovery!

### The Breadfruit Tree's Early Voyages

Archaeologists believe that several waves of migration took place in the western Pacific, the most recent of these commencing about 1500 B.C.E.\* Starting in Southeast Asia, the Lapita people used large double-hulled canoes to migrate through countries known today as Indonesia, New Guinea, New Caledonia, Vanuatu, and Fiji and on out into the central Pacific. These journeys included truly amazing feats of navigation, considering that some trips between islands involved crossing hundreds of miles of open ocean.

The Lapitas' oceangoing double-hulled canoes could carry a large number of people along with domestic animals, food supplies, and a variety of seeds, cuttings, and potted plants. As the Lapita fanned out across the Pacific, they discovered and populated the islands of Melanesia, Polynesia, and Micronesia to the north and New Zealand to the south. They spread out like the waves of a tide, eventually rippling as far afield as Easter Island and Hawaii.<sup>#</sup> Wherever they voyaged, among their most distinguished "passengers" was the hardy breadfruit tree.

\* Of course, this date is based on archaeology alone and does not take into account the Bible's chronology.

<sup>#</sup> Some historians believe that a few of these ancient Pacific travelers reached as far as the Peruvian coast in South America and that on their return journey, they introduced the South American sweet potato to the Pacific. If this is true, it would mean that the sweet potato island-hopped in the reverse direction of the breadfruit, eventually reaching Southeast Asia, where the breadfruit originated.

### A Versatile and Nutritious Food

Today in Fiji, as in many other parts of the world, the breadfruit is of great value as a nutritious, low-cost food. Some varieties of the tree are hardy and prolific, bearing fruit as often as three times a year for up to 50 years, even when weather conditions are not ideal. The fruit has a breadlike texture, and its many varieties have differing flavors. The taste is usually described as being partway between bread and potato. It can be boiled, steamed, baked, or fried, and it is often made into a dessert. It can be dried and crushed into flour for cooking, and when pulped and fermented, it stays fresh for years.

The leaves can be wrapped around such foods as fish or chicken in order to retain moisture and flavor during cooking. The peeled seed too is edible and has a nutty taste. The sap is sometimes collected and enjoyed by children as chewing gum. What a variety of uses! It is not hard to understand why some Pacific islanders feel a particular affinity for the breadfruit tree.

Ledula, who lives in Fiji, tells us that the mention of breadfruit brings back both good and bad childhood memories. Her family had five big breadfruit trees. It was Ledula's job to clean the yard of their leaves, a chore she hated. On the other hand, often after school, she and her siblings picked the fruit and sold as many as they could from door to door. Their parents then used the proceeds for items that they needed for attending Christian assemblies, such as food, bus fare, or new shoes.

Perhaps you live in one of the many parts of the earth now playing host to this widely traveled "passenger" with the high-sounding name *Artocarpus altilis*. Previously you may not have thought of this wonderful creation as a treasure or even as an item of value or beauty. However, many who live in the Pacific find that the name breadfruit conjures up images of great nautical feats and voyages of discovery, of the Lapita people, and of Captain Bligh.

# Watching the World

## Global Weapons Stockpile Growing

In 2001 an estimated 639 million small firearms were held by the police, the military, rebel forces, and individuals worldwide, reports *Small Arms Survey 2002*, a UN-supported study. "This is at least 16 per cent greater than previously estimated," notes the *Survey*. Moreover, the global stockpile of small arms grows by roughly 1 percent each year through new production. Presently, pistols, rifles, mortars, and shoulder-fired rocket launchers are produced in over 98 countries worldwide by at least 1,000 companies. According to the report, "the [total] value of global small arms production, including ammunition, in 2000 . . . was estimated to be at least USD 7 billion." Between 80 and 90 percent of the global trade in small arms is legal, with the largest number of firearms (59 percent) belonging to civilians.

## Killer Smog

"Up to a fifth of all lung cancer deaths in cities are caused by tiny particles of pollution, most of them from vehicle exhausts," reports *New Scientist* magazine. Researchers in the United States and Canada tracked approximately half a million Americans for 16 years, taking into account such risk factors as age, sex, race, smoking history, diet, alcohol consumption, and exposure to pollutants on the job. "The research focused on particles less than 2.5 micrometres in diameter," says *New Scientist*, because "these fine particles are thought to kill by lodging deep in the

lungs." The study found that the risk of exposure to smog in some cities is "comparable with the risks to long-term passive smokers," says the magazine.

## Unregistered Births

"The births of more than 50 million children go unregistered each year—more than 40 per cent of total births worldwide," reports the United Nations Children's Fund (UNICEF). It adds: "In 39 countries, at least 30 per cent of all children were not registered at birth and in 19 countries the proportion was at least 60 per cent." What does this mean? Without birth certificates, children do not legally exist, and this can limit their access to basic human services. "Birth registration is a fundamental human right, opening the door to other rights such as education, health care, . . . and protection from discrimination, abuse and exploitation," says UNICEF. And the

problems resulting from unregistered births are not limited to children. "In later life, the unregistered adult may be unable to . . . obtain a marriage licence," states the report.

## "Ecological Bankruptcy" Looming

Scientists estimate that if the consumption of the earth's natural resources continues at the present rate, "we are preparing for ecological bankruptcy," reports Canada's *Globe and Mail* newspaper. According to a study first published in the journal *Proceedings of the National Academy of Sciences*, it has been calculated that in 1961, "humans used 70 per cent of the planet's yearly potential for biological productivity. By 1999, it was 120 per cent. Today, it's about 125 percent." This means that it would take the earth 15 months "to regenerate the natural capital that humanity uses" through fishing, farming,

## Master Mimics

It has been said that starlings can imitate the calls of over 40 different birds. But that is not all. The common starling has been observed mimicking buses, sirens, chain saws, car alarms, sheep, and even whinnying horses. But now they have added a new sound to their repertoire—the warbling of cell phones. So "if you hear a cell phone ring outdoors, you may be startled to discover that the 'phone' has feathers," reports *National Geographic* magazine. "As cell phones proliferate, mockingbirds, mynahs, and other mimics are likely to get into the act," says the magazine.





### "Lying Is Tough Work for the Brain"

Researchers at the University of Pennsylvania have found that the brain has to work much harder to tell a lie than it does to tell the truth. Dr. Daniel Langleben has been studying this phenomenon using a functional magnetic resonance imaging (fMRI) machine to pinpoint which parts of the brain are activated when a person lies. When faced with a question, our brain first needs to process it. Then, "almost by instinct, a liar will first think of the true answer before devising or speaking [a] false answer," reports *The News of Mexico City*. "In the brain, you never get something for nothing," says Langleben. "The process for telling a lie is more complicated than telling the truth, resulting in more neuron activity." This increased neuron activity shows up on an fMRI like a light bulb. "Even for the smoothest-talker, lying is tough work for the brain," says the paper.



mining, and burning fossil fuels every year. "Part of the reason things are getting so much worse so quickly is that the biological capacity of the planet is diminishing as some land becomes too damaged to grow crops. Even worse, the demands on that biological capacity are increasing as the world population grows," states the newspaper.

### Converting Churches

"When Mark Twain visited Montreal in 1881, he remarked that 'you couldn't throw a brick without breaking a church window.' Nowadays, you might break the window of a condo in a church," says *The Gazette* newspaper of Montreal. Although the city still has about 600 places of worship, the paper says that up to 100 of them, many of them Catholic, may be put up for sale in the next de-

cade. "According to the Archdiocese of Montreal, as many as 25 Catholic parishes have closed since 1960." Canada's Catholic population grew from about 1.5 million in 1871 to almost 10 million in 1971; yet, "church attendance plummeted, especially in Quebec," says *The Gazette*. Bernard Fortin, in charge of pastoral planning for the Archdiocese of Montreal, told the paper that attendance at the churches in that area has dropped from 75 percent in 1970 to about 8 percent today.

### Television-Induced Eating Disorders

According to a report in *The Independent* of London, "there is a significant link between television and symptoms of eating disorders in young girls." Dr. Anne Becker of Harvard Medical School, in the United States, conducted interviews

among adolescent girls in Fiji shortly after television was introduced in 1995. She found that television "appears to have had a profoundly negative impact on body image and eating disorder behaviour." How? Fijian culture traditionally encourages good appetites and larger body shapes. But after viewing television characters who are slender, many of the schoolgirls were prompted to copy them. For example, before television was introduced to Fiji, not even one of the girls in the study had ever made herself vomit in order to control her weight. Three years later, however, 11.3 percent reported doing so. Researchers also found that 69 percent of the schoolgirls said that they had dieted to lose weight, and nearly three quarters said that they felt "too big or fat."

# From Our Readers

**Police** I want to thank you for the cover series "The Police—Why Do We Need Them?" (July 8, 2002) My father was killed three years ago in an automobile collision. Two local police officers delivered the news to our family and offered help and condolence. One even held my mother in his arms as she wept. I am sure that it is never easy for these officers to carry out such tasks, but what would we do without them?

*D. E., United States*



The cover series on the police has made me want to ask a question. Would it be appropriate for one of Jehovah's Witnesses to choose this occupation? I assume that if a fight ensued, you might have to pull a gun and use it, possibly killing someone.

*J. S., Australia*

**"Awake!" responds:** Our cover series simply acknowledged some of the beneficial work performed by the police in maintaining order and providing other necessary services. Most of Jehovah's Witnesses avoid employment that would require them to carry a weapon, since they do not want to incur bloodguilt by taking a life. (Exodus 20:13; Matthew 26:51, 52) It should be noted, however, that there are many people employed by law-enforcement agencies who do not have to carry any kind of weapon, and in some countries most policemen do not carry guns.

I just finished reading the articles concerning our need for the police. They were very well written and were sympathetic to the difficult job that policemen have in trying to keep a semblance of order in this chaotic world. My wife and I served as traveling ministers back in the '70's, and we stayed in a basement apartment in an old Kingdom Hall while serving a congregation in the inner city. It was warm, so we cracked open a window for ventilation. At two in the morning, my wife woke me up because two men were outside the window. I listened to them talking. One said that the window was usually closed. The other said that there was probably someone inside

because there was a car in the parking lot. They were policemen, and apparently they regularly checked on the security of the Kingdom Hall. We slept more soundly after that!

*P. S., United States*

The articles on the police are timely—and especially so after the terrorist attacks on the World Trade Center and the Pentagon, in the United States. Hopefully, we have developed a greater appreciation for the police, firemen, and other public servants who have the responsibility of protecting citizens and property not only from terrorism but also from criminal acts in general.

*H. B., United States*

**Roommates** I had been hoping for an article on roommates for a long time. When I read the article "Young People Ask . . . How Can I Find a Good Roommate?" (May 22, 2002), I was surprised to find that there are people who don't necessarily want to become best friends with their roommate or go everywhere with him or her and that this is normal. At the same time, a roommate is a big help with finances as well as with housework. Thank you for teaching me a balanced view.

*S. M., Japan*

In two weeks I will begin sharing an apartment with a fellow Witness in Dresden. I must say that the good advice in the articles on roommates appearing in the issues of April 22, May 22, and June 22, 2002, is perfect and has come at the right time. Keep it up!

*R. P., Germany*

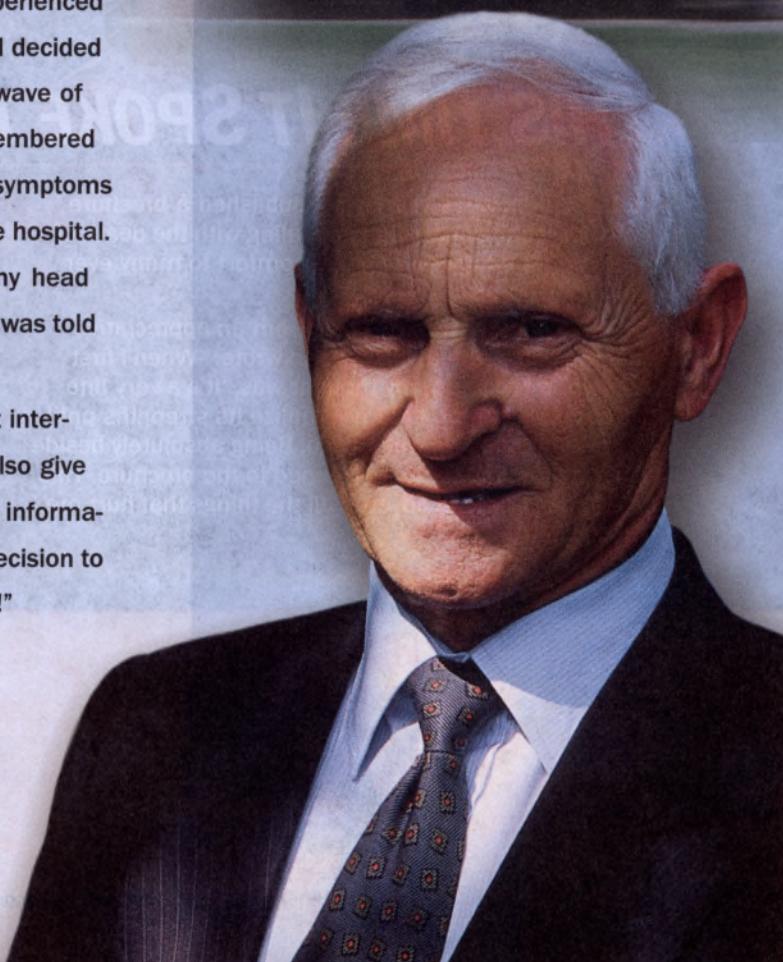
# **"Awake! Saved My Life!"**

The publishers of *Awake!* received an appreciative letter from Italy. In part, it reads:

"I have read *Awake!* for 40 years, and I admire its presentation of a wide range of practical subjects. Recently, I was at work when I experienced a sharp pain in my stomach and chest. I decided to go home, but when I had a second wave of pain, something clicked. I clearly remembered an article in *Awake!* that described the symptoms of a heart attack.\* I decided to go to the hospital. I was still in the waiting room when my head slumped to one side and I passed out. I was told this the next day in intensive care.

"I am here today because of the swift intervention of skillful doctors. But I must also give credit to your magazine, which provided information that helped me to make the wise decision to go to the hospital. *Awake!* saved my life!"

\* See our issue of December 8, 1996, page 6.

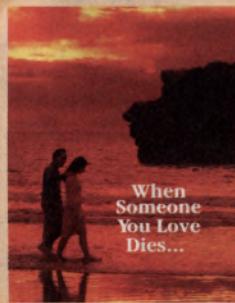


# **"THIS TIME IT SPOKE TO ME"**

In 1994, Jehovah's Witnesses published a brochure that discusses the challenge of dealing with the death of a loved one. It has been bringing comfort to many ever since.

Recently, a letter was received from an appreciative reader in Pennsylvania, U.S.A., who wrote: "When I first obtained the brochure, my thought was, 'It's a very fine publication.' However, I did not realize its strengths until I lost my daughter two weeks ago. Being absolutely beside myself and looking for help, I turned to the brochure. This time it spoke to me. It covered all the things that hurt me, and it comforted me."

The brochure *When Someone You Love Dies* answers such questions as: How can I live with my grief? How can others help? What hope is there for those who have died?



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