

Awake!

October 8, 1996

Can Government End **CRIME?**



**Can Government
End Crime?****3-11**

Has crime ever reached out to strike you or your loved ones? Even if it hasn't, you will still rejoice to know that government will soon put an end to crime. But how? And which government?



Parks Canada/J. N. Flynn

**A Fragile but
Hardy Traveler 15**

Butterflies are beautiful creations. One type migrates thousands of miles.

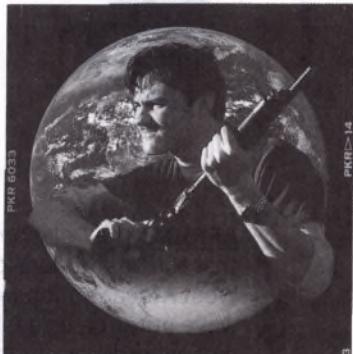
**Sickle-Cell Anemia
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Cover and page 2 dome: U.S. National Archives photo

WHERE IS THE COUNTRY FREE OF CRIME?



Earth on pages 3, 6, and 9: NASA photo

His funeral was one of the biggest that Moscow had seen in years. Thousands of people lined the streets to pay their last respects to the young Russian whose life had been abruptly ended on March 1, 1995, by assassins' bullets. Shot to death practically on his doorstep, Vladislav Listyev, voted journalist of the year in 1994, had been a highly popular television personality.

LESS than three weeks later, on March 20, the Tokyo subway system was in its early morning rush hour when it was struck by a poison-gas attack. Several died; many others were seriously injured.

Then on April 19, Oklahoma City became the focal point of television viewers the world over. They watched in horror as rescue workers pulled battered

bodies out of the wreckage of a federal building just demolished by a terrorist bomb. The death toll was 168.

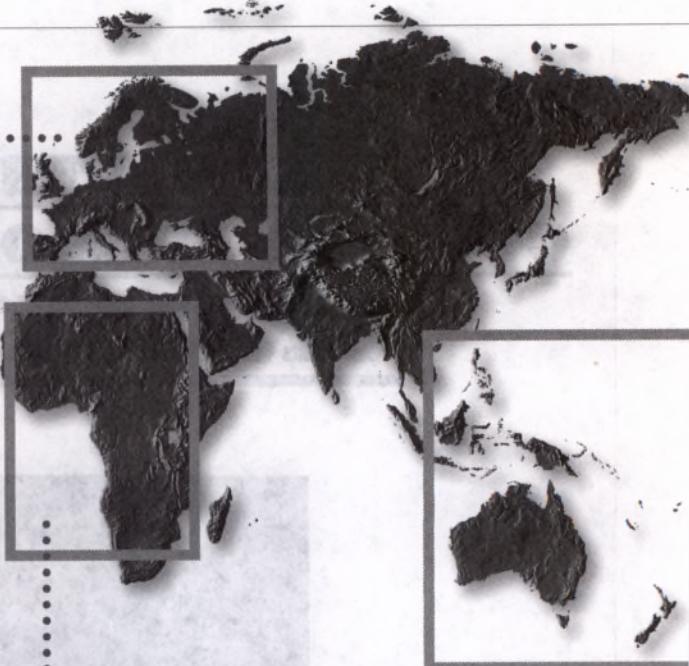
In late June of this year, another such attack, near Dhahran, Saudi Arabia, killed 19 Americans and injured some 400.

These four events illustrate that crime is taking on new dimensions. "Normal" crime is increasingly being added to by brutal acts of terrorism. And all four events—each in its own particular way—show how vulnerable everyone has become to criminal attack. Whether you are at home, at work, or on the street, crime can reach out to claim you as one of its victims. Indeed, a British survey showed that almost three quarters of Britons think that they are more likely to be the victim of a crime now than they were ten years ago. The situation where you live may be similar.

Law-abiding citizens long for a government that will do more than just control crime. They want a government that will actually put an end to it. And while comparative crime rates might suggest that some governments are more effective in crime prevention than others, *the overall picture* shows that human government is losing its struggle against crime. Still, it is not unrealistic or Utopian to believe that government will soon put an end to crime. But which government? And when?

A WORLD FULL OF CRIME

EUROPE: An Italian book ("The Opportunity and the Thief") said that in a short period, the number of crimes against property in Italy had "reached peaks once considered impossible." The Ukraine, a republic of the former Soviet Union, reported 490 crimes per 100,000 population in 1985 and 922 by 1992. The number continues to rise. No wonder a Russian newspaper ("Arguments and Facts") wrote: "We dream of living—of staying alive—of surviving this fearful period of time . . . fear of taking a train—it could be derailed or vandalized; fear of flying—hijackings are frequent or the plane could crash; fear of riding the subway—because of collisions or explosions; fear of walking the streets—you could be caught in cross fire or be robbed, raped, beaten, or killed; fear of riding in a car—it could be set on fire, blown up, or stolen; fear of entering apartment building hallways, restaurants, or stores—you could be injured or killed in any one of them." The Hungarian magazine HVG likened a sunny city in Hungary to "Mafia headquarters," saying that in the last three years, it had been "the starting point for every new type of crime . . . Fear's chain reaction is growing as people see the police unprepared to battle the Mafias."



AFRICA: The Daily Times of Nigeria reported that the "institutions of higher learning" in a West African nation were experiencing "a wave of terror, unleashed by members of secret cults: almost to the point of grounding the pursuit of any meaningful academic exercise." It continued: "The wave is becoming increasingly widespread, accompanied by the loss of lives and properties." Of another African country, The Star of South Africa reported: "There are two forms of violence: inter-communal conflict, and ordinary criminal violence. The first has reduced remarkably, the second has soared."

Awake!

Why Awake! Is Published Awake! is 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.

Would you welcome more information? Write Watch Tower at the appropriate address on page 5. Publication of Awake! is part of a worldwide Bible educational work supported by voluntary donations.

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OCEANIA: The Institute of Criminology of Australia estimated that crime there costs "at least \$27 billion each year, or nearly \$1600 for each man, woman and child." This is "about 7.2 per cent of the gross domestic product."

THE AMERICAS: *The Globe and Mail* of Canada reported an increase in violent crime in Canada during a recent period of 12 consecutive years, all "part of a trend that has produced a 50-per-cent increase in violence over the past decade." Meanwhile, *El Tiempo* of Colombia reported that in Colombia, 1,714 kidnappings took place in a recent year, "a figure that is more than double all the kidnappings recorded in the rest of the world during the same period." According to the Justice Department of Mexico, a sex crime was committed in its capital every four hours during a recent year. A spokeswoman pointed out that the 20th century has been characterized by a depreciation in the worth of individuals. "We live in a generation of use it and then throw it out," she concluded.

WORLDWIDE: The book *The United Nations and Crime Prevention* notes "a steady increase worldwide in criminal activity in the 1970s and 1980s." It says: "The number of recorded crimes rose from about 330 million in 1975 to nearly 400 million in 1980 and is estimated to have reached half a billion in 1990."



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STRUGGLING TO END CRIME



YOUTH'S Claim Boredom Is Main Cause of Juvenile Crime," declared a headline in a leading British newspaper. "Home Strife Blamed for Rising Crime," said another. And a third stated: "Addictions 'Prompt Thousands of Crimes.'" The magazine *Philippine Panorama* estimated that 75 percent of all violent crimes in Manila were committed by drug abusers.

Other factors may also contribute to sparking criminal behavior. "Poverty in juxtaposition to great wealth" is one that was referred to by the Nigerian inspector-general of police. Peer pressure and poor job prospects, the absence of strong legal deterrents, the general breakdown in family values, the lack of respect for authority and

law, and the excessive violence in films and videos are also cited.

Another factor is that many people no longer believe that crime does not pay. A sociologist at Bologna University in Italy observed that over a period of many years, "the number of thefts reported and the number of persons convicted for them have followed opposite trends." He noted that "the number of convictions in proportion to the total number of reported thefts has plummeted from 50 to 0.7 percent."

Sad but true are the words of *The New Encyclopaedia Britannica*: "Increasing crime appears to be a feature of all modern industrialized societies, and no developments in law or penology can be shown to have had a significant impact on the problem.

... For modern urbanized society, in which economic growth and personal success are dominant values, there is no reason to suppose that crime rates will not continue to increase."

Is This View Too Negative?

Is the situation really all that bad? Do not some localities report crime decreases? True, some do, but statistics can be misleading. For example, it was reported that crime in the Philippines decreased by 20 percent after a gun ban was introduced. But *AsiaWeek* explained that one official believes that car thieves and bank robbers had stopped stealing cars and robbing banks and had "switched to kidnapping." Fewer bank robberies and car thefts caused a drop in total cases of crime, but this decrease lost much of its significance in view of the four-fold increase in kidnappings!

Reporting on Hungary, the magazine *HVG* wrote: "Compared with the first half of 1993, crime figures are down by 6.2 percent. What the police forgot to mention is that the decrease . . . is mainly due to ad-

ministrative changes." The monetary level at which cases of theft, fraud, or vandalism were previously registered was raised by 250 percent. So property crimes involving values below this level are no longer registered. Since crimes involving property account for three fourths of all crime in the country, the decrease was hardly genuine.

Arriving at accurate crime figures is admittedly difficult. One reason is that many crimes—perhaps up to 90 percent in certain categories—go unreported. But arguing whether crime has decreased or increased is actually beside the point. People yearn for crime to be eliminated, not just reduced.

Governments Are Trying

A 1990 United Nations survey revealed that the more highly developed countries spend an average of 2 to 3 percent of their annual budgets on crime control, while developing countries spend even more, an average of 9 to 14 percent. Increasing the size of the police force and providing it with better equipment takes priority in some localities. But results are mixed. Some Hungarian citizens complain: "There are never enough policemen to catch the criminals but always enough to catch traffic violators."

Many governments have recently found it necessary to pass tougher crime laws. For

Crime deterrents: Closed-circuit TV camera and monitor, roll-down steel gate, and guard with trained dog

example, since "kidnapping is on the rise across Latin America," says *Time* magazine, the governments there have responded with laws that are "at once vigorous and ineffectual.... Passing laws is one thing," it admits, "applying them another."

It is estimated that in Britain more than 100,000 neighborhood watch schemes, covering at least four million homes, existed in 1992. Similar programs were implemented in Australia in the mid-1980's. Their aim, says the Australian Institute of Criminology, is to reduce crime "by improving citizens' awareness about public safety,



by improving residents' attitudes and behaviour in reporting crime and suspicious events in the neighbourhood and by reducing vulnerability to crime with the help of property identification and installation of effective security devices."

Closed-circuit television is used in some places to link police stations with commercial premises. Video cameras are used by police, banks, and stores as a crime deterrent or as a tool for identifying lawbreakers.

In Nigeria the police have checkpoints on highways in efforts to apprehend robbers and carjackers. The government has set up a task force on trade malpractices to combat fraud. Police-community relations committees made up of community leaders inform the police of criminal activity and people of questionable character.

Visitors to the Philippines note that homes are generally not left unattended and that many people have watchdogs. Businessmen employ private security guards to protect their businesses. Anti-theft devices for cars sell well. People who can afford to do so withdraw to tightly secured subdivisions or condominiums.

**Crime makes
people
prisoners
behind their
own doors**



The London newspaper *The Independent* commented: "As confidence in the rule of law falls, citizens are organising the defence of their own communities in increasing numbers." And more and more people are arming themselves. In the United States, for example, it is estimated that every second household owns at least one gun.

Governments are constantly developing new methods of combating crime. But V. Vsevolodov, of the Academy of Home Affairs in Ukraine, points out that according to UN sources, so many gifted people are finding "unique methods of carrying on criminal activity" that "the training of law enforcement personnel" cannot keep up. Clever criminals funnel huge sums of money back into businesses and social services, merging with society and "gaining for themselves high positions in society."

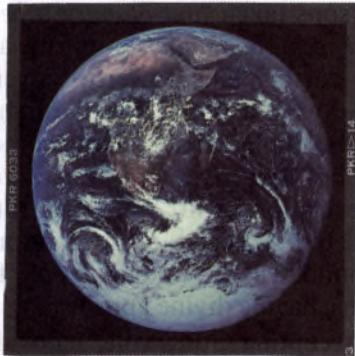
Losing Confidence

An increasing number of people in some countries are even coming to believe that government itself is part of the problem. *Asiaweek* quoted the head of an anticrime group as saying: "About 90% of suspects we arrest are either police or military men." Whether true or not, reports like this led one legislator to comment: "If those who are sworn to uphold the law are themselves the lawbreakers, our society is in trouble."

Corruption scandals involving high officials have rocked governments in different parts of the world, further undermining citizen confidence. Besides losing faith in the ability of governments to curb crime, people are now questioning their determination to do so. An educator asked: "How could these authorities now combat crime when they themselves are neck-deep in the mire?"

Governments come and governments go, but crime remains. Yet, there is a time coming soon when crime will be no more!

AT LAST— A GOVERNMENT THAT WILL END CRIME



THE Bible foretold that in our day people would be “lovers of themselves, lovers of money, self-assuming, haughty, blasphemers, disobedient to parents, unthankful, disloyal, having no natural affection, not open to any agreement, slanderers, without self-control, fierce, without love of goodness.” (2 Timothy 3:2, 3) Such types of people commit crimes.

Since *people* commit crimes, to the extent that they change for the better, crime is reduced. But it has never been easy for people to change for the better. Today it is harder than ever, for since 1914, a date established by Bible chronology, we have been living in “the last days” of this system of things. As the Bible foretold, this period is characterized by “critical times hard to deal with.”

These critical times are caused by Satan the Devil, the greatest criminal of all, who has “great anger, knowing he has a short period of time.”—2 Timothy 3:1; Revelation 12:12.

That explains today’s upsurge in crime. Satan knows that he and his system are soon to be destroyed. During the short remaining time, he seeks in every way possible to foster in humans the bad traits mentioned in 2 Timothy chapter 3. Thus, for a government to end crime, it must get rid of Satan’s influence and also help people to change so that they no longer act in the way described above. But is any government up to this superhuman task?

No human government is capable of doing this. J. Vaskovich, a law teacher in Ukraine, suggests the need for “a common capable body, which would unify and coordinate the efforts of all state and public organizations.” And President Fidel Ramos of the Philippines stated at a world conference on crime: “Because modernization has made our world smaller, crime has managed to cross national boundaries and has developed into a transnational problem. It follows that solutions should likewise be transnational.”



"A Worldwide Tragedy"

The United Nations is a transnational (international) body. Since its founding, it has sought to combat crime. But it has no more answers than the national governments have. The book *The United Nations and Crime Prevention* notes: "Domestic crime has outstripped the control of most individual nations and transnational crime has accelerated far beyond the current reach of the international community. . . . Crime by organized criminal groups has expanded to alarming proportions, with particularly serious consequences in terms of physical violence, intimidation and corruption of public officials. Terrorism has claimed tens of thousands of innocent victims. Predatory trafficking in addictive narcotics has become a world-wide tragedy."

James Madison, fourth president of the United States, once said: "In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself." (Compare Ec-

clesiastes 8:9.) So the ideal solution would be to replace governments "administered by men over men" with a system whereby God would govern. But is such a solution realistic?

The Government That Will End Crime

True Christians believe what the Bible says about God's Kingdom.* It is a real government. Although the Kingdom is invisible because of being in heaven, its accomplishments on earth are visible. (Matthew 6:9, 10) It is composed of Christ Jesus and 144,000 persons taken "*out of every tribe and tongue and people and nation . . . to rule as kings over the earth.*" This powerful government will rule over "a great crowd" of subjects who, as the Bible foretells, also come "*out of all nations and tribes and peoples and tongues.*" (Revelation 5:9, 10; 7:9) Thus, both the rulers and the subjects are international in background, a truly united people from all nations, having divine approval.

Accepting God's rule, Jehovah's Witnesses have to a great degree overcome the problem of crime within their own ranks. How? By learning to appreciate the wisdom of Bible principles, by applying them in their lives, and by letting themselves be motivated by the most powerful force in the universe, God's spirit, and its fruitage—love. God's Word states: "Clothe yourselves with love, for it is a perfect bond of union." (Colossians 3:14) In over 230 lands, Jehovah's Witnesses practice this love and unity, demonstrating how God's Kingdom is already taking steps to put an end to crime.

This can be illustrated by the results of a 1994 survey in which 145,958 of Jehovah's Witnesses in Germany participated. Many of them admitted that they had had to over-

A former thief and his victim, now united as Christian brothers



* For a detailed explanation of what God's Kingdom is and how it will benefit believing humankind, please read the book *Knowledge That Leads to Everlasting Life*, published by the Watchtower Bible and Tract Society of New York, Inc.

come serious faults in order to become Witnesses. They were motivated to do so by their study of the Bible. For example, 30,060 overcame tobacco or drug addiction; 1,437 gave up gambling; 4,362 rectified violent or criminal behavior; 11,149 overcame traits like jealousy or hatred; and 12,820 restored domestic tranquillity to strained family life.

Although these findings involved Jehovah's Witnesses in only one country, they are typical of Witnesses the world over. Take, for example, a young Ukrainian named Yuri. At the time that he began studying the Bible with Jehovah's Witnesses, he was a pickpocket. He had even traveled to Moscow where he knew the crowds would make his "work" easier.

In 1993, Yuri was again in Moscow, among crowds of people. But none of the over 23,000 people present at Locomotive Stadium on Friday, July 23, had to fear him, for he was now one of Jehovah's Witnesses. Indeed, Yuri was on the stage participating in a program presented to an international audience. Changed for the better, he obeys the Bible's injunction: "Let the stealer steal no more."—Ephesians 4:28.

Numerous others like Yuri have forsaken lives of crime in order to qualify for life in God's new world of righteousness. This underscores the truthfulness of what Sir Peter Imbert, a former British police official, said: "Crime could be controlled overnight if everyone was prepared to make the effort." The Bible educational program offered by God's government provides honesthearted people with the motivation they need "to make the effort."

A Crimeless World

Crime in any form displays a lack of love for others. Christians follow the example of Jesus, who said: "You must love Jehovah your God with your whole heart and with your whole soul and with your whole mind."

And, "You must love your neighbor as yourself."—Matthew 22:37-39.

The only government dedicated to ending crime by teaching people to obey these two commandments is God's Kingdom. Today, over five million Witnesses of Jehovah benefit from this instruction. They are determined not to let criminal tendencies take root in their hearts, prepared to make whatever personal effort is necessary to contribute to a crime-free world. What God has accomplished in their lives is but a foretaste of what he will do in his new world under the rulership of his heavenly government. Imagine a world with no need for policemen, judges, lawyers, or prisons!

Achieving this on a worldwide scale will involve the greatest governmental upheaval in history, brought about by God himself. Daniel 2:44 says: "In the days of those kings [existing today] the God of heaven will set up a [heavenly] kingdom that will never be brought to ruin. And the kingdom itself will not be passed on to any other people. It will crush and put an end to all these kingdoms, and it itself will stand to times indefinite." God will also crush Satan, ending his evil influence.—Romans 16:20.

Once human governments have been replaced by God's heavenly government, humans will never again rule over one another. Heavenly kings—kings even higher than the angels—will instruct humankind in the ways of righteousness. Then, no more assassinations, poison-gas attacks, or terrorist bombs! No more social injustices that breed crime! No more haves and have-nots!

Professor S. A. Aluko, of Obafemi Awolowo University in Nigeria, observed: "The poor cannot sleep at night because they are hungry; the rich cannot sleep because the poor are awake." But soon everyone will be able to sleep soundly in the knowledge that government—God's government—has finally put an end to crime!



Who Should Decide Family Size?

BY AWAKE! CORRESPONDENT IN BRAZIL

ONLY three days old, the boy was abandoned in a plastic bag in a subway station. But a Brazilian newspaper noted that several families offered to adopt the baby.

Although that particular type of incident is rare, the number of unwanted and abandoned children throughout the world is growing. Responsible parenthood is too often lacking. Is contraception the solution? Would it be wrong to plan the size of one's family?

According to the World Health Organiza-

tion, about 50 percent of pregnancies worldwide are unplanned. Often a pregnancy is not only unplanned but also unwanted.

Many seek to avoid pregnancy, perhaps because of health, housing, or work problems. Hence, contraceptive methods, such as birth-control pills or condoms, are common. Abortion and sterilization are also used as birth control methods. Regarding abortion in Brazil, the newspaper *O Estado de S. Paulo* reports: "The World Health Organization estimates that annually 5 million of the 13 million women who get pregnant in Brazil interrupt the pregnancy clandestinely." Also, *Time* magazine reported that 71 percent of Brazilian women of childbearing age who live with a mate practice birth control. Of these, 41 percent use the pill and 44 percent have been sterilized.

A survey shows that 75 percent of Brazilians think that it is necessary to plan the number of children. Others reject family planning because of belief in destiny or because of thinking that it is God's will that a family have 'as many children as God sends.' Who should decide the size of the family—the couple or national or religious interests?

Millions of children are abandoned



Birth Control—Why Controversial?

Although permitting the rhythm method, the Roman Catholic Church, Brazil's largest religion, objects to contraceptive methods, whether they are abortive or not. Stated Pope Paul VI: "Every conjugal act [has] to be open to the transmission of life." Pope John Paul II said: "Contraception, judged objectively, is so profoundly illicit that it can never, for any reason, be justified." As a result, many Catholics hesitate to regulate the size of their family, considering contraception a sin.

On the other hand, the medical journal *Lancet* declares: "Millions will spend their lives uneducated, unemployed, ill-housed and without access to the most elementary health, welfare and sanitary services, and unchecked population increase is a major causal factor." Hence, fearing overpopulation and poverty, certain governments encourage family planning, despite objections of the church. For example, "Costa Rica reduced the average number of children [per family] from 7 to 3," says biologist Paul Ehrlich.

The UN publication *Facts for Life—A Communication Challenge* states: "After a woman has had four children, further pregnancies bring greater risks to the life and health of both mother and child. Especially if the previous births have not been spaced more than two years apart, a woman's body can easily become exhausted by repeated pregnancy, childbirth, breastfeeding, and looking after small children."

Large families are still common where infant mortality is high, particularly in rural areas of Africa, Asia,

Children need loving care

and Latin America. Why? Many are not familiar with contraceptive methods. One factor in some areas may be that, as one legislator said, "a man still considers himself a real man only if his wife gets pregnant every year." *Jornal da Tarde* mentions another possible factor, especially from the woman's viewpoint: "The children are one of their rare sources of pleasure and bring a sense of personal accomplishment." Also, Paulo Nogueira Neto, former secretary of the environment in Brazil, stated: "A child is the social security of the poor population."

What the Bible Says

Did you know that God's Word, the Bible, leaves it to the husband and wife to decide family size? It also shows that marriage is appropriate, whether for procreation or for showing affection by honorable sexual intimacy.—1 Corinthians 7:3-5; Hebrews 13:4.

But did God not tell Adam and Eve in Paradise to "be fruitful and become many and fill the earth"? (Genesis 1:28) Yes, yet nothing in the Bible shows that we are under that



same command today. Writer Ricardo Lezcano pointed out: "It seems somewhat contradictory to apply to [billions of] human beings the same formula that was applied to the only two inhabitants of the planet." Even if the decision is to have no children at all, this is a personal choice to be respected.

Interestingly, the *New Catholic Encyclopedia* notes that the view of Jehovah's Witnesses is Bible based. It states: "Except for birth control, which they leave to the couple's own decision, their conjugal and sexual morality is quite rigid." It adds: "They regard the Bible as their only source of belief and rule of conduct."

Are all methods for limiting family size valid? No. Since life is sacred, God's Law to Israel decreed that one who caused an abortion be treated as a murderer. (Exodus 20:13; 21:22, 23) In the case of sterilization, such as by a vasectomy, the decision is one of personal conscience, since this is not directly mentioned in the Bible. "Each one will carry his own load." (Galatians 6:5)* And as there are various methods of birth control, medical guidance can help a couple decide whether they wish to employ a particular one or not.

Make Decisions You Can Live With

Not everything in life can be planned. But would you buy a car or a house without giving serious thought to what is involved? A car or a house can be sold again, but children are not returnable. When planning a pregnancy, then, should not the husband and wife's ability to provide life's necessities be considered?

Surely, we would not want our family to be undernourished, nor would we want to be a burden on others. (1 Timothy 5:8) At the same time, besides food and shelter, children need education, moral values, and love.

In addition to calculating what is required in terms of work, money, and patience, the

wife's health has to be considered. The wise timing of pregnancies saves lives and promotes better health. *Facts for Life* says: "One of the most effective ways of reducing the dangers of pregnancy and child birth for both mother and child is to plan the timing of births. The risks of child-bearing are greatest when the mother-to-be is under 18 or over 35, or has had four or more previous pregnancies, or when there is a gap of less than two years since the last birth."

Couples thinking about having children ought to consider that, as the Bible foretold, we are surrounded by a world filled with crime, famine, war, and economic uncertainty. (Matthew 24:3-12; 2 Timothy 3:1-5, 13; Revelation 6:5, 6) Genuine love for children will help couples to be realistic regarding the world we live in, appreciating that raising children is in our time a great challenge. So rather than just letting things happen and having as many children as come along in hopes that everything will turn out right, many prefer to choose how large their family will be so that their children will enjoy a greater measure of happiness and security.

Besides helping us to make wise decisions on family matters, God's Word gives us a solid hope for the future. The Bible shows that it is the Creator's purpose for humans to live forever in peace and happiness on a paradise earth. To accomplish this, God will soon bring this wicked system of things to an end. Then, in a righteous new world free from poverty and overpopulation, children will never again be thrown away because of being unwanted.—Isaiah 45:18; 65:17, 20-25; Matthew 6:9, 10.

Clearly, consideration for each other and for the children, as well as a balanced view of procreation, will help a couple to decide the size of their family. Instead of just letting things take their own course, they should prayerfully seek God's guidance. "The blessing of Jehovah—that is what makes rich, and he adds no pain with it."—Proverbs 10:22.

* See *The Watchtower*, May 1, 1985, page 31.



a fragile but hardy traveler

Artists paint them and poets write about them. Numerous varieties live in tropical rain forests. Many live in woodlands, in fields, and on prairies. Some weather the cold of mountaintops; others, the heat of deserts. They have been described as one of the most beautiful of all insects.

BY AWAKE! CORRESPONDENT IN CANADA

NO DOUBT you are familiar with this exquisite and graceful creature—the butterfly. One type of butterfly, however, has gained worldwide fame for its amazing feats of travel. This fragile but hardy traveler is the monarch. Let us take a closer look at this jewel of creation and its incredible migrations.

Delicate Jewel of Creation

Picture yourself in a meadow on a warm, sunny day. Keep your eyes fixed on those graceful winged wonders darting here and there among the wildflowers, in their endless search for food and drink. Stand motionless

with your arm extended. One is coming closer. Oh, it is going to light on your arm! Notice how softly it lands.

Now take a closer look. Observe its two pairs of powdery, delicate orange wings, etched in black, with intricately designed borders. It has been said that the monarch was named by English settlers in America who associated it with their monarch, William of Orange. Indeed, this butterfly is a “monarch.” But this fragile beauty, weighing only one fortieth of an ounce and with a wingspan of three to four inches, is capable of making long, arduous journeys.

Butterfly: Parks Canada/J. N. Flynn

Impressive Flights

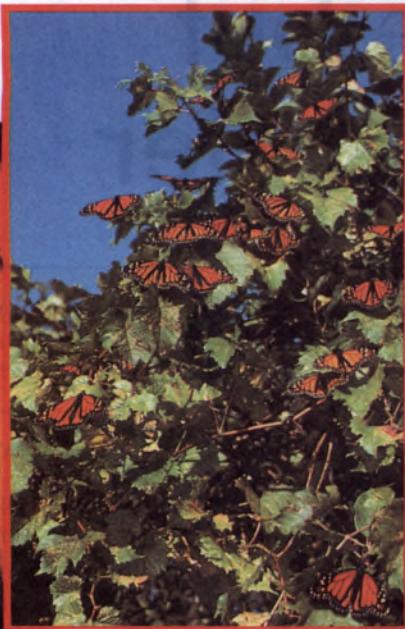
While some butterflies are said to migrate longer distances with the onset of winter, only the monarch makes such long journeys with precise destinations and in such great numbers. The migration of the monarch is truly a butterfly phenomenon. Consider some of the impressive feats of these hardy travelers.

Their flight from Canada in the fall to their wintering grounds in California or Mexico exceeds 2,000 miles. They cross large lakes, rivers, plains, and mountains. Millions of them successfully complete migration to a destination high in the Sierra Madre mountains of central Mexico.

Such flights are all the more astonishing when you consider that the young butterflies have never made this flight before, nor have they seen the hibernation sites. But unerringly they sense the flight direction and know when they have arrived at their winter habitats. How do they do it?

Canadian Geographic states: "Clearly, there is some sophisticated genetic programming in their modest little brains, some means perhaps of reading the angle of sun rays, as bees do, or the earth's magnetic field, which seems to guide birds. An ability to detect specific temperature and moisture conditions may help at the end."

But so far the answers have eluded science." Like the creatures mentioned in the Bible book of Proverbs, "they are



instinctively wise."—Proverbs 30:24.

The monarchs are also master fliers. They glide at about 7 miles per hour, soar at about 11 miles per hour, and—as anyone who has tried to catch one knows—dart even faster, at about 22 miles per hour. They are most adept at utilizing the winds—even tacking against prevailing westerlies to move southwest toward their destination. Using complicated flight strategies, they deal with variations in wind speed and direction. In much the same manner as glider pilots and hawks, they catch rides on thermals (updrafts of warm air). According to one source, monarchs commonly travel as many as 120 miles a day. They fly only during the daylight. At night they rest, often in the very same location each year.

University of Toronto scientist David Gibo has learned that the monarch is more than an occasional soarer or glider. He reports: "The butterflies have to play the wind in what I think are much more clever ways than migrating geese do." The routine of flapping, soaring, and feeding allows the monarchs to arrive in Mexico with enough fat to last them through the winter and the start of their flight back north in the spring. Professor Gibo also says: "Gliding is how they make the long trip and end up fit and healthy."

Page 16 top and bottom: Parks Canada/J. N. Flynn; middle: Parks Canada/D. A. Wilkes; page 17 top: Parks Canada/J. N. Flynn; middle and bottom: Parks Canada/J. R. Graham



Mass Migrations

It has been known for a long time that monarchs west of the Rocky Mountains migrate south and winter in California. They can be seen hanging in clusters in pine and eucalyptus trees in places along the southern coast of California. But the destination of the migration of large populations of monarchs in eastern Canada remained a mystery for some time.

In 1976 this mystery was unraveled. Their wintering grounds were finally discovered—a wooded summit in the Sierra Madre mountains of Mexico. Millions upon millions of butterflies were found densely loaded upon the branches and trunks of the tall, gray-green fir trees. This impressive sight continues to be a fascinating attraction for visitors.

One of the best places in Canada to see the monarchs en masse is at Point Pelee National Park, Ontario, where they cluster in preparation for their migration south. In late summer they congregate in this southerly point in Canada, waiting on the north shore of Lake Erie until the winds and temperature are favorable before taking off on their southern journey to their wintering sites in Mexico.

Destinations

Starting at Point Pelee, they island-hop across Lake Erie to begin the long journey across the continental United States. En route, other groups of monarchs join them in the migration. High in the mountains northwest of Mexico City, an estimated one hundred million congregate to spend the winter.

Other migrations take place through Florida and across the Caribbean, and these may end up in destinations yet to be discovered in the Yucatán Peninsula or in Guatemala. Whether in Mexico or in their other winter havens, the monarchs crowd together in a few relatively small patches of mountain forest.

One might think that their long flight to their winter home would take them to a vacation land of warm, sunny meadows. But not so. The Transvolcanic Range of Mexico, where they go, is cold. The climate provided by the mountain peaks, however, is just right for their wintering. It is cold enough to cause them to spend their time in a state of almost total inactivity—thus stretching their life span to eight or ten months, which allows for flying to Mexico, wintering there, and starting back. You could say it is a vacation of sorts.

Spring arrives, and the monarchs become active again. As the days lengthen, the butterflies flutter in the sunlight, begin to mate, and start their flight back north. Some, it is believed, may make the complete journey back, but it is generally only the progeny that arrive in the summer ranges in Canada and the northern United States. Three or four generations of eggs, caterpillars, pupae, and butterflies gradually move back up the continent. The female—loaded with a hundred or more fertilized eggs—flutters through the patches of wildflowers and lays her eggs one at a time on the undersides of young, tender milkweed leaves. And so the cycle goes on, and the journey to the monarch's summer home continues.

Truly, the monarch is a fascinating creature. What a privilege humans have to observe and study its activities. Not surprisingly, though, the monarch's long-secret wintering grounds in Mexico, as well as destinations in California, are being threatened by human enterprise. To assume that these delicate beauties of creation have somewhere else to go could result in their extinction. commendably, efforts are being made to protect them from such an eventuality. How grand it will be when in the Creator's promised Paradise earth now near at hand, these fragile but hardy travelers will be guaranteed a safe haven!

R A D I O

An Invention That Changed the World

BY AWAKE! CORRESPONDENT IN ITALY



Top left and right, bottom left: "MUSEO della RADIO e della TELEVISIONE" RAI-TORINO; bottom right: NASA photo

ARIFLE shot rent the silence of the Italian countryside. That signal gave Guglielmo Marconi confirmation that the rudimentary equipment he was using had worked. Electromagnetic waves generated by a transmitter and radiated into space had been picked up a mile and a half away by a receiver. It was 1895. Although back then nobody could fully grasp all the implications, that rifle shot opened the way

for a technology that has since revolutionized our world—radio communication.

The nature of electromagnetic waves had already been studied by a number of scientists. In 1831, English physicist Michael Faraday demonstrated that an electric current could produce a magnetic field and induce a current in a second circuit isolated from the first but placed in proximity to it. In 1864, Scottish physicist James Maxwell theorized

that the energy generated by such fields could radiate in waves—like ripples on the surface of a pond—but at the speed of light. Later, German physicist Heinrich Hertz confirmed Maxwell's theory, producing electromagnetic waves and detecting them at close range, as did Ernest Rutherford (later, Lord Rutherford) in New Zealand. But by adapting and improving the available equipment and adding a crude antenna of his own, Marconi managed to transmit a telegraphic signal a considerable distance. Wireless telegraphy was on the way!

In 1896, 21-year-old Marconi moved from Italy to England, where he was presented to William Preece, chief engineer of the General Post Office. Preece was interested in applying Marconi's system to maritime communications between points that could not be connected by cable. He offered Marconi the help of technicians and the use of laboratories for his experiments. In a few months, Marconi succeeded in increasing the power of signals transmitted to a range of six miles. In 1897, Marconi founded the Wireless Telegraph and Signal Company, Ltd., with the aim of transforming wireless telegraphy into a commercially viable system.

In 1900 a 200-mile radiotelegraphic link was made between Cornwall and the Isle of Wight in south England, demonstrating what was once considered impossible—the overstriding of the earth's curvature with radio waves. It had been thought that signals would not be received past the horizon, since electromagnetic waves travel in straight lines.* Then the first important orders for radios began to arrive. The British Admiralty commissioned the installation of radio sets on 26 ships, as well as the construction and maintenance of six land sta-

tions. The following year Marconi succeeded in bridging the Atlantic with a faint signal of three dots that indicated the letter *S* in Morse code. The invention's future was ensured.

Technological Development

At first, wireless telegraphy could transmit neither words nor music, just Morse code. However, in 1904 a great step forward was taken with the advent of the diode, the first valve vacuum tube, which made transmission and reception of the voice possible. This transformed wireless telegraphy into radio as we know it today.

In 1906, in the United States, Reginald Fessenden broadcast music that was picked up by ships 50 miles away. In 1910, Lee De Forest staged a live transmission of a concert given by the famous Italian tenor Enrico Caruso for the benefit of radio amateurs in New York. A year before, signals to regulate time-pieces were transmitted from the Eiffel Tower in Paris, France, for the first time. That same year, 1909, the first radio-assisted rescue of survivors took place, from the steamers *Florida* and *Republic*, which had collided in the Atlantic. Three years later, over 700 survivors of the *Titanic* disaster were also saved, thanks to an SOS sent by radio.

As early as 1916, the possibility of having a radio in every home was envisioned. The use of valves made production of efficient, low-cost receivers possible, throwing open the door that led to the widespread development of commercial radio. The boom came first in the United States, where there were 8 stations by the end of 1921 and 564 had been licensed by November 1, 1922! In many homes, apart from the lighting system, the radio was the first appliance to be hooked up to the electricity supply.

Within two years of the start of regular commercial transmission, the Bible Students, as Jehovah's Witnesses were then known,

* The explanation of the phenomenon came in 1902, when physicists Arthur Kennelly and Oliver Heaviside theorized about the existence of an atmospheric layer that reflected electromagnetic waves—the ionosphere.

were also using radio to broadcast their message. In 1922, J. F. Rutherford, then president of the Watch Tower Society, delivered his first radio discourse, in California. Two years later, WBBR, a station built and owned by the Watch Tower Society, began broadcasting from Staten Island, New York. Eventually, the Society organized worldwide networks to broadcast Bible programs. By 1933 a peak of 408 stations were carrying the message of God's Kingdom.—Matthew 24:14.

In many nations, however, radio became a State monopoly. In Italy, Mussolini's government saw the radio as an instrument of political propaganda and prohibited its citizens from listening to foreign broadcasts. The enormous power of radio was amply demonstrated in 1938. During the broadcast of a science fiction story in the United States, Orson Welles sowed panic among the populace, some of whom thought that Martians had landed in New Jersey and were using a sinister "heat ray" to kill all who opposed them!

A Hundred Years of Radio

In 1954 the favorite pastime of people in Italy was listening to the radio. Despite the success of television, radio is still very popular. In most European countries, the radio is listened to for information or entertainment by 50 to 70 percent of the population. It is estimated that in the United States, there is a radio in 95 percent of the vehicles, 80 percent of the bedrooms, and more than 50 percent of the kitchens.

One of the reasons for the radio's popularity, even in the era of television, is its portability. Moreover, according to a survey, radio possesses a "power of emotional and imaginative involvement far superior to that of television."

During 1995, celebrations in Italy for the centennial of Marconi's experiment offered occasion to reflect on the progress made by

Despite the success of television, radio is still very popular

radio. Numerous scientists have made contributions to the transformation of the first crude devices into the advanced systems of today. Now, thanks to digital audio broadcasting, which is a system of numeric codification of the signal, excellent sound quality is guaranteed. But above and beyond the countless everyday applications of radio, the invention was the starting point for TV, radar, and various other technologies.

Radio astronomy, for example, is based on the reception and analysis of radio waves emitted by heavenly bodies. Without radio the development of space technology would have been impossible. All satellite applications—television, telephone, data gathering—depend on the use of radio waves. The technological development of transistors into microchips led first to pocket calculators and computers and then to international information networks.

Mobile telephones capable of connecting any two points on the face of the earth, or almost, are already a reality. The prospect now is the arrival of palm-size wireless receivers—a combination of TV, telephone, computer, and fax. These receivers will be capable of tuning in to hundreds of video, audio, and text channels and will allow users to exchange electronic mail with others.

One cannot be certain what the future holds for this field. But radio technology continues to advance, so other remarkable developments are likely to come.

SICKLE-CELL ANEMIA

Knowledge Is the Best Defense

BY AWAKE! CORRESPONDENT IN NIGERIA

THREE were 32 people in the conference room, mostly women and children. Six-year-old Tope, frail, dressed in pink, sat quietly beside her mother, on a wooden chair. She listened as the nurse spoke to them about what to do when the pain comes.

Tope knew about pain—pain that comes terribly and suddenly and lasts for days before it subsides. Perhaps it was the pain that made her serious beyond her years.

"She is my firstborn," said her mother. "From the beginning she was always sick. I went to many churches, and they prayed over her. But she still got sick. Finally, I took her to the hospital. They tested her blood and found she was a 'sickler.'"

What Is It?

At the Center for Sickle-Cell Anemia in Benin City, Nigeria, Tope's mother learned that sickle-cell anemia is a disorder of the blood. Contrary to superstitious beliefs, it has nothing to do with witchcraft or spirits of the dead. Children inherit sickle-cell anemia from both parents. It is not contagious. There is no way you can catch the disorder from another person. Either you are born with it or you are not. Tope's mother also learned that while there is no cure, the symptoms can be treated.*

* Other inherited sickle-cell disorders that affect the ability of blood to carry oxygen are sickle-cell hemoglobin C disease and sickle beta thalassemia.

Sickle-cell anemia occurs mostly in those of African descent. Dr. I. U. Omoike, director of the Center for Sickle-Cell Anemia, told *Awake!*: "Nigeria has the largest black population of any nation and therefore has the largest number of sicklers of any nation. That makes this country the sickle-cell capital of the world." According to the *Daily Times* of Lagos, about one million Nigerians have sickle-cell anemia, and 60,000 die of it each year.

A Problem in the Blood

To understand the disorder, we need to know what blood does and how it moves through the body. An illustration helps. Imagine a country that depends on imported food to feed people living in rural villages. Trucks drive to the capital city where they are loaded with food. They leave the city along major highways, but as they enter the rural areas, the roads narrow.

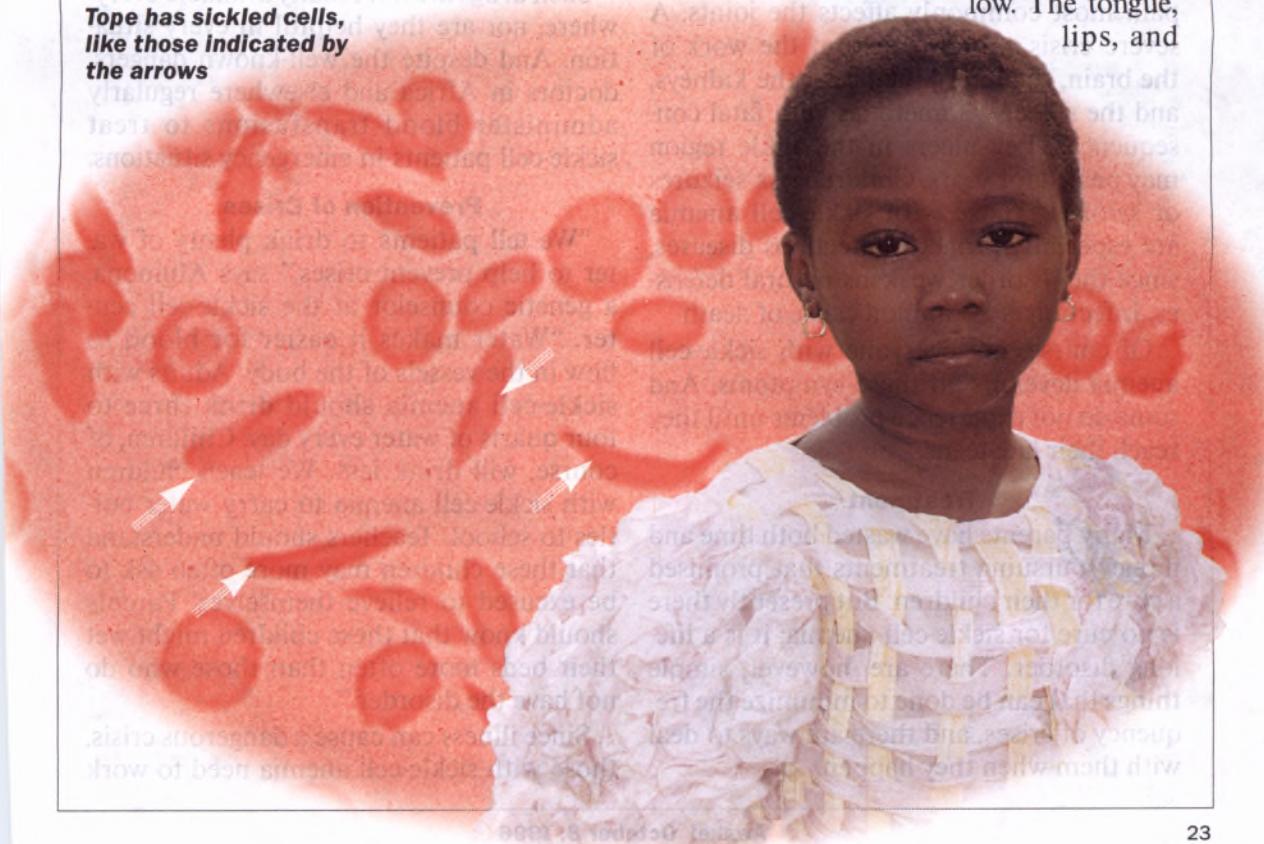
If everything goes well, the trucks reach their destination, drop off their food, and then return to the city to collect more food for the next delivery. If many of the trucks break down, however, the food spoils and other trucks are blocked from passing. Then the people in the villages have little to eat.

In like manner, the red cells in the blood travel to the lungs where they pick up a supply of oxygen—food for the body. They then leave the lungs and travel swiftly

through major arteries to all parts of the body. Eventually, the "roads" become so small that the red cells can move only in single file through tiny blood vessels. It is there that they deposit their load of oxygen, which feeds the cells of the body.

A normal red blood cell is round like a coin and moves through the smallest blood vessels quite easily. But in people who have sickle-cell anemia, the blood cells break down. They lose their round shape and take the form of a banana or a sickle—a farmer's implement. These sickled blood cells get stuck in the small veins of the body, like a truck in the mud, blocking other red blood cells from passing. When the flow of blood to a part of the body is reduced, the oxygen supply is cut off and the result is a painful crisis.

**Type has sickled cells,
like those indicated by
the arrows**



A typical sickle-cell crisis results in excruciating pain in bones and joints. Crises are unpredictable; they can occur rarely or as often as every month. When they do occur, they are distressing to both child and parent. Ihunde is a nurse who works at the sickle-cell center. "It is not easy to manage a sickler child," she says. "I know, because my daughter has the disorder. The pain comes suddenly. She screams and cries, and I cry. Only after two or three days, maybe after a week, will the pain subside."

Symptoms

Symptoms often appear after the child reaches the age of six months. One of the first signs is painful swelling of the hands or the feet or both. The child may cry frequently and not eat much. The whites of the eyes may appear yellow. The tongue, lips, and

The Importance of Love

Joy, who is now in her early 20's, suffers from sickle-cell anemia. Since she is one of Jehovah's Witnesses, she has never accepted a blood transfusion. Her mother, Ola, says: "I have always made sure that Joy has had good food to help build up her blood. I believe that loving parental care means a lot. Her life, like that of all my children, is very precious to me. Of course, all children need love, but how much more so do those struggling with an illness!"

palms may be paler than normal. Children showing these symptoms should be taken to a hospital, where a blood test can show if the problem is sickle-cell anemia.

When sickled cells clog blood vessels, pain most commonly affects the joints. A severe crisis can also disrupt the work of the brain, the lungs, the heart, the kidneys, and the spleen—sometimes with fatal consequences. Leg ulcers in the ankle region may persist for years. Children risk seizures or strokes. Those with sickle-cell anemia are especially prone to infectious diseases, since the disorder weakens natural defenses. Infection is a common cause of death.

Of course, not everyone with sickle-cell anemia develops all these symptoms. And some do not experience problems until they reach their late teens.

Treatment

Many parents have wasted both time and money pursuing treatments that promised a cure for their children. But presently there is no cure for sickle-cell anemia; it is a life-long disorder. There are, however, simple things that can be done to minimize the frequency of crises, and there are ways to deal with them when they happen.

When a crisis occurs, parents should give their child plenty of water to drink. They can also give a mild pain-relieving drug. Severe pain may require stronger drugs that can be obtained only from a doctor. Sadly, though, sometimes even powerful drugs bring little relief. There is no need to panic, however. In almost all cases, after a few hours or days, the pain subsides and the patient recovers.

Scientists are searching for drugs to help treat the disorder. Early in 1995, for example, the National Heart, Lung, and Blood Institute in the United States announced that the drug hydroxyurea reduced by half the frequency of painful crises in sickle-cell patients. It is thought to do this by preventing red blood cells from changing their shape and clogging the blood vessels.

Such drugs are not readily available everywhere, nor are they helpful in every situation. And despite the well-known dangers, doctors in Africa and elsewhere regularly administer blood transfusions to treat sickle-cell patients in emergency situations.

Prevention of Crises

"We tell patients to drink plenty of water to help prevent crises," says Alumona, a genetic counselor at the sickle-cell center. "Water makes it easier for blood to flow in the vessels of the body. Adults with sickle-cell anemia should drink three to four quarts of water every day. Children, of course, will drink less. We teach children with sickle-cell anemia to carry water bottles to school. Teachers should understand that these children may more often ask to be excused to relieve themselves. Parents should know that these children might wet their beds more often than those who do not have the disorder."

Since illness can cause a dangerous crisis, those with sickle-cell anemia need to work

hard to maintain good health. They can do this by maintaining personal cleanliness, by avoiding prolonged strenuous activity, and by eating a balanced diet of good food. Doctors also recommend that the diet be reinforced by multivitamins and folic acid.

In areas where malaria is common, those with sickle-cell anemia are wise to protect themselves, both by avoiding mosquito bites and by taking drugs to protect against the disease. Since malaria destroys red blood cells, it can be particularly dangerous to a person with sickle-cell anemia.

Those with sickle-cell anemia should also have regular medical checkups. Any infections, illnesses, or injuries should receive prompt medical attention. By carefully following such guidelines, it is possible for many with sickle-cell anemia to live normal, happy lives.

How It Is Passed On to Children

To understand how the disease is passed on from parents to their children, we need to know about blood genotypes. A blood genotype is different from a blood group; a genotype has to do with the genes. Most people have a blood genotype called AA. Those who inherit an A gene from one parent and an S gene from the other parent have an AS blood genotype. People with AS blood do not have sickle-cell anemia, but they can pass the disorder on to their offspring. People who inherit an S gene from one parent and another S gene from the other parent have an SS blood genotype, the genotype of sickle-cell anemia.

Thus, for a child to inherit SS-type blood, he or she must inherit the defective S gene from *each* parent. Just as it takes two people to have a baby, it takes two people to pass on sickle-cell anemia. Usually, the disorder is passed on when both parents have AS-type blood. When a person with AS-type

blood marries another person with AS-type blood, there is a 1 in 4 chance that any child born to them will have SS-type blood.

This does not mean that if they have four children, one will have sickle-cell anemia and the other three will not. While it might be that one of the four is SS, it could also happen that two, three, or even all four of them are SS. It could also happen that none of the children are SS.

Informed Decisions Before Marriage

People of African descent are wise to find out what their blood genotype is long before they consider marriage. This can be done by a blood test. People who have AA blood can be assured that none of their children will develop sickle-cell anemia, no matter whom they marry. Those who have AS blood should understand that if they marry a person who also has AS blood, they run a high risk of producing a child that will have sickle-cell anemia.

While many doctors strongly discourage AS from marrying AS, the counselors at the sickle-cell center let people make their own decision. Dr. Omoike says: "Our job is not to frighten people or to tell them who they should or should not marry. No one can predict for sure that children born to an AS couple will have SS blood, since that is a matter of chance. Even if they do have an SS child, that child may tolerate the disorder without too many problems. But we do want people to know what their genotype is. And we try in advance to help people to be aware of what could happen so that if they do have SS children, it will be no surprise. That way, they are in a position not only to make decisions based on knowledge of the facts but to prepare themselves mentally to accept the consequences of those decisions."

The Love That Binds

IN 1978 a huge storm in the North Atlantic buffeted the luxury ocean liner *Queen Elizabeth 2*. Waves the height of a ten-story building crashed down on the ship, making it bob like a cork. Furniture and passengers were thrown about as the vessel pitched wildly. Remarkably, only minor injuries occurred among the 1,200 passengers. Good engineering, materials, and construction kept the ship from breaking apart.

Centuries ago there was another ship in the grip of a tempestuous storm. The apostle Paul and 275 others were on board. Fearing that the ship would be broken to pieces by the intensity of the storm, the sailors apparently passed "helps"—chains or ropes—under the ship from one side to the other to hold together the wooden planks that made up this merchant ship's hull. All the passengers on board were saved, though the ship was not.—Acts, chapter 27.

Trials in life may sometimes make us feel as if we were on a ship in turbulent seas. Waves of anxiety, disappointment, and depression can sweep over us, testing our love to the limit. To weather such storms and avoid breaking apart, we too need some helps.

When Storms Arise

The faith and endurance of the apostle Paul are well chronicled in the

Bible. He slaved in behalf of the early Christian congregations. (2 Corinthians 11:24-28) His accomplishments in the work of the Lord give clear testimony to his intense love for his neighbors and his strong relationship with God. Yet, Paul's life was not always smooth sailing. Both literally and figuratively, the apostle weathered many storms.

In Paul's day, when a ship encountered a turbulent storm, the survival of the passengers and the ship depended on the skill of the crew as well as on how well the ship held together. It was no less so when the apostle encountered figurative storms. Though Paul had weathered physical deprivation, imprisonment, and torture, the severest storms that challenged his spiritual and emotional stability and his ability to continue to love came from within the Christian congregation.

For example, Paul labored tirelessly for a year and a half to establish the congregation in the city of Corinth. His experiences with the Corinthians caused him to develop tender feelings for the flock. Paul even spoke of himself as being a father to them. (1 Corinthians 4:15) Yet, despite his record of love and hard work in behalf of the congregation, some in Corinth spoke abusively



of Paul. (2 Corinthians 10:10) In light of all that he had done in the way of self-sacrifice, how disheartening that must have been!

How could those who had received of Paul's unstinting love be so cruel and disparaging? Paul must have felt as if he were being pulled apart, like a ship in the grip of a tempest. How easy it would have been for him to give up, to feel that his past efforts were all in vain, or to become bitter! What held Paul together? What prevented him from being pulled apart by disappointment?

The Love That Holds Us Together

Paul left no doubt in the minds of his readers as to the wellspring of both his strength and his motivation. He wrote: "The love the Christ has compels us." (2 Corinthians 5:14) Paul pointed to the preeminent source of strength and motivation. The compelling force is "the love the *Christ* has." A Bible scholar made the following observation with regard to this scripture: "Paul does not say that *our* love for Christ holds us to our ministry . . . That would be stopping at the halfway station. Our love for Christ is kindled and constantly fed by *his* love for us."—Italics ours.

The love that Christ demonstrated by submitting himself to an agonizing death on a torture stake—thereby giving his perfect human life as a ransom to save all believing mankind—motivated, compelled, and constrained Paul to continue serving in the interests of Christ and the brotherhood. Thus, Christ's love controlled Paul, restraining him from selfishness, and confined his aims to the service of God and of fellowmen.

Indeed, the source of motivation behind a Christian's faithful life course is Christ's love. When we are faced with trials that can

have a debilitating effect on us physically, emotionally, and spiritually, the compelling force of Christ's love enables us to go beyond the point where someone less motivated would give up. It gives us the strength to endure.

We cannot rely on our imperfect emotions to sustain and motivate us. This is especially so when our trials come as a result of disappointment or anxiety. On the other hand, Christ's love has the power to hold us to our ministry, to sustain and motivate us, notwithstanding our personal trial. Christ's love enables a Christian to endure not only beyond the expectations of others but perhaps even beyond his own expectations.

Moreover, since Christ's love is enduring, the effect is never-ending. It is a compelling force that does not waver or diminish. "Love never fails." (1 Corinthians 13:8) It enables us to go on following him faithfully, come what may.

Emotional trials exert a force that can pull us apart. How vital it is, therefore, that we meditate on the love Christ demonstrated for us. Christ's love will hold us together. His love makes it possible to avoid a shipwreck of our faith. (1 Timothy 1:14-19) Further, Christ's love compels us to do all we can to glorify the one who made the expression of Christ's love possible, Jehovah God.—Romans 5:6-8.

IN OUR NEXT ISSUE

From Words That Hurt to Words That Heal

The Truth Gave Me Back My Life

Cigarettes—Do You Reject Them?

WATCHING THE WORLD

Tobacco Consumption

Although tobacco consumption has significantly decreased in some countries, most nations show increases over the past two decades. China, for example, is still the world's largest consumer and had a 297 percent increase. The United States and India maintained the number two and three consumer spots and showed increases of 27 percent and 50 percent respectively. Some other countries having large increases are Rwanda with 388 percent; Greece, 331 percent; North Korea, 325 percent; Tanzania, 227 percent; Hong Kong, 214 percent; Indonesia, 193 percent; Singapore, 186 percent; and Turkey, 185 percent. The figures, printed in *Asia-week*, show the percentage of change between 1970 and 1993. Of the 138 nations listed, only 26 showed decreases in tobacco consumption.

Youths and Guns

Deaths by gunfire are increasing faster among American youths ages 10 to 19 than among any other group, says a report by the Children's Defense Fund. Guns are now the second leading cause of death. Accidents, mostly vehicular, are the primary cause. Of American youths under 20, one died every 92 minutes from gunfire in 1993—an increase of 7 percent over the preceding year. By comparison, in all age groups, the increase was only 4.8 percent. The defense fund accused the government of doing too little to keep guns away from children and schools. U.S. Justice Department figures are said to concur. The number of juvenile murderers has tripled in the last decade, surpassing

26,000 in 1994. The number of those using guns as their murder weapons has quadrupled in the same period, although the number of those using other weapons remained about the same. The figures underscore the damage done by the availability of firearms.

Suicide Patterns

"About 30,000 Americans [kill] themselves every year," notes *Scientific American*, and "men are four times more likely than women to take their own lives." The rate of suicide also increases with age, reflecting the stresses of poor health and diminished prospects. The suicide



rate among those 75 years of age or older is four times greater than that of teenagers. What are the factors that determine whether a person will actually commit suicide? Prominently listed are lack of family and community support and less participation in religion. Compared with other countries, U.S. suicide rates lie in the middle range, with a rate of about 11 suicides for every 100,000 people.

Training in Violence

■ "A year-long study of television programming, conducted by researchers at four universities, concludes that 'psycholog-

cally harmful' violence is pervasive on broadcast and cable TV programs," says *The Washington Post*. The study found not only that the majority of programs contained some violence but also that the manner in which it was depicted could have harmful effects on viewers. Such "include learning to behave violently, becoming more desensitized to the harmful consequences of violence and becoming more fearful of being attacked." One reason was that the perpetrators in 73 percent of the cases of violent acts on TV go unpunished, giving the message that "violence is successful." Also, most portrayals do not show the consequences to victims, such as pain or emotional or financial harm. And, says the study, the frequent use of handguns in violent incidents on TV can "trigger aggressive thoughts and behaviors."

■ By the age of 30, people who watched a lot of TV violence when at a tender age "will have more convictions for violence, more arrests for drunken driving, be more aggressive under the influence of alcohol and be more abusive towards their spouse [and] also have more aggressive children," claims Len Eron, a professor of psychology and a research scientist at the University of Michigan's Institute for Social Research. Video games cause similar problems. As reported in *The Toronto Star* newspaper, Eron said that the danger associated with a video game is that it is interactive. Players "move a lever or push a button and they themselves are carrying out this awful, violent action—killing someone." Professor Eron feels that more parental supervision is needed.

However, he laments that "a lot of parents simply don't care."

France's Clergy Shortage Accelerates

There is an increasing shortage of Catholic clergymen in France. The Paris newspaper *Le Monde* reports that in 1995, there were only 96 priests ordained in all of France and just 121 in 1994. The Jesuits had but 7 novices and the Dominicans 25 in 1995. The situation is similar for the recruitment of Catholic nuns. *Le Monde* says that "since the 1970's, the number of nuns has continued to dwindle, from 92,326 in 1977 to just 51,164 last year." In view of the advancing age of the majority of the clergy and the church's failure to attract new recruits, predictions are that by the year 2005, there will be only about 9,000 parish priests in France. *Le Monde* cites "the clergy's drop in social status, people's fear of long-term commitments, the clergy's unattractive image, and the loss of confidence in church leaders" as reasons for the decline.

The World's Most Accurate Clock

A clock one thousand times more accurate than the atomic clocks used in England to determine an accepted international standard of time has been developed by scientists in Perth, Western Australia. Known as the sapphire clock, its cost is about \$200,000, and several have already been built. It can measure one fleeting *femtosecond*, which is one millionth of a billionth of a second! Of what use is it? According to Einstein's general theory of relativity, time runs faster the higher one is above the earth. "Our goal is to measure the difference in speed over a height of about one metre—in

other words between your feet and your head," said physicist David Blair, who worked on developing the clock. However, its stability lasts for only five minutes at a time.

The Lowly Sandwich?

In 1762, Britain's Lord Sandwich, an inveterate gambler, stayed for 24 hours at a gambling table. To satisfy his hunger, he called for two slices of bread with a piece of meat between them. This new food snack—the sandwich—was promptly named after him. The British now spend \$7.9 million each day on sandwiches, a rise of 75 percent in



the past five years. "Sandwiches account for more than a third of the total fast-food market," reports *The Times* of London, and they are dispensed from 8,000 sandwich bars. Some 1.3 billion ready-made sandwiches are consumed in Britain each year. These sandwiches, however, are often far removed from the simple fare families pack when picnicking in the countryside or at the seashore. Some outlets offer exotic varieties, including sandwiches made of kangaroo or alligator meat or chocolate bread spread with strawberries and cream.

Asia's Child-Sex Trade

Governments and social workers estimate that more than a million boys and girls, aged 17 and younger, are involved in

prostitution in Asia, states *The New York Times*. While the exact figures are unknown, children who have not even entered puberty can be found in the brothels of such countries as Cambodia, China, India, the Philippines, Taiwan, and Thailand. Why are children who are so young sought after? One reason is the fear of AIDS. "Men throughout Asia are turning toward younger and younger children, partly because they are deemed less likely to be infected with H.I.V., the virus that causes AIDS," says the *Times*. Nonetheless, the AIDS virus is rapidly spreading among the prostitutes in these countries, partly because of the trafficking in prostitutes across borders and partly because the customers, some on sex tours, travel from place to place. While some children are abducted, others are sold by their parents for material gain.

Rivalry or Unity?

"The celebration of the 2000th anniversary of Christ's birth is fast becoming a sensitive issue among churches," reports ENI (Ecumenical News International) Bulletin. Konrad Raiser, general secretary of the World Council of Churches, has called on the churches to look upon the event "as an occasion for cooperation and unity—rather than competition for visibility." He said, though, that the churches seemed more intent on using the year as "an occasion for evangelisation . . . to overcome their marginalisation in the public." While commanding the pope for his call to have the year 2000 "become the occasion for a strong affirmation of Christian unity," Raiser added: "How much of these dreams can be fulfilled by the year 2000 remains to be seen—past experience nourishes scepticism."

FROM OUR READERS

Rich Nations Exploit Poor Ones I am 14 years old, and I am very grateful to you for the series "Will Rich Nations Always Exploit Poor Ones?" (November 22, 1995) My geography teacher gave us an assignment to write on the subject "Misery." I looked in newspapers and magazines but found nothing that would be suitable to use. Then, at the crucial time, this magazine arrived to serve as the basis for my report. I received the highest mark in the class, and I am very grateful for these articles.

A. O., Brazil

Compulsive Behavior Thank you for the upbuilding article "Compulsive Behavior—Does It Control Your Life?" (February 8, 1996) I suffer from compulsive behavior, and it is very encouraging to know that I am not alone. It has bothered me very much since childhood. Since studying the Bible, I have been obsessed with the thought that I have sinned against the holy spirit. Gradually, I have got my problems under control. How good to know that Jehovah understands his imperfect servants!

A. B., Germany

I appreciated very much that our Creator understands this malady and that he "is greater than our hearts and knows all things." (1 John 3:20) Please continue to publish articles of this kind; they are of great encouragement to us.

W. E., Switzerland

You cannot imagine how much this article comforted me. I have had terrible, blasphemous thoughts, which have led to depression and sometimes to thoughts of suicide. But now it is as if an enormous weight has been lifted off my shoulders, as I realize that Jehovah has not rejected me but loves me deeply.

I. B., France

Since I was small, I have washed my hands repeatedly. I check the stove three times, even if I have to return from outside to do it. I check that the tops are on my pans, that I have closed all the doors properly. I go to bed exhausted from battling compulsive behaviors. Thank you for your article.

M. P., Venezuela

Robins I was enchanted by the article "The Friendly Robin." (February 8, 1996) A few years ago, while digging a trench in the garden, I heard the delightful song of a robin that was standing on the nearby lawn observing me. No sooner had I tried to imitate its voice than it was standing beside me in the trench. The robin enjoyed picking out the insects that surfaced with each spadeful of soil. Please continue publishing reports about the animal world!

F. S., Germany

Icebergs Thank you for the article "Crystal Palaces of the Sea." (December 8, 1995) Just reading that material and imagining myself in front of one of those gigantic blocks of ice, I was impressed by the marvelous things that our Creator, Jehovah God, has provided for our pleasure. As the psalmist said of Jehovah at Psalm 104:24, "the earth is full of [his] productions."

A. I. B., Brazil

School Essay The story of Eric's school essay "If I Could Change a Moment in Time" (February 22, 1996) really moved me. It aroused in me a sense of admiration and gratitude for his parents. They must have dedicated much time and energy to raising a son who has such remarkable courage and love for Jehovah, despite his tender years.

C. N., Italy

CHEWING THEIR WAY TO MISERY

CATCHY jingles on the radio encourage people to use it. Film stars promote it in TV, magazines, and newspapers as leading to an exciting, prestigious way of life. But the small print warns that using the product could injure your health. What is it? An addictive and harmful substance known as pan.

Pan is used in Asia—very widely in India. In its traditional form, it consists of a mixture of crushed betel nut, tobacco, and other taste-enhancing ingredients. The tobacco and betel nut make the pan addictive. These are placed on a betel-pepper leaf that has been smeared with pastes of mineral lime and catechu, an astringent plant product. The leaf is folded to enclose the filling, and then the entire package is put into the mouth. A popular form is *pan masala*, the same ingredients mixed in dry form and packed in small sachets that can be carried easily and used at any time.

Chewing takes quite a while and produces large amounts of saliva, which have to be spit out at intervals. Most homes where pan is popular have a spittoon, but outside the home a footpath or a wall becomes a receptacle. This is the cause of the brownish-colored stains that can be seen on stairways and corridors of many buildings in India.

According to a Tata Institute of Fundamental Research study, 10 percent of India's new cancer cases each year are oral cancer—about twice the world average. Dr. R. Gunaseelan, an oral and maxillofacial surgeon, joins surgeons all over India in laying the blame largely on the chewing of pan. He states in the *Indian Express*: "All forms of pan are harmful for the mouth." He noted that pan "definitely can lead to oral cancer" and that "chewing it is like inviting facial deformities." So, using pan could mean chewing one's way to misery.

Ten percent of India's new cancer cases are oral cancer

WHO photo by Eric Schwab



"YOU WOULD DO BETTER CONSULTING AWAKE!"

THAT is what Pasquale, a young Witness of Jehovah who was taking a college course in Bari, Italy, was told when he asked his psychology teacher for some notes that she had on drug addiction. Yet, in the past this teacher had shown prejudice toward Jehovah's Witnesses. What had caused her attitude to change?

Pasquale explained: "At the end of a lesson, the teacher asked her students for help in finding material on child abuse, the subject on which she was preparing a postgraduate thesis. I remembered a few issues of *Awake!* that dealt with this and related subjects, such as 'Sex Education—Who Should Give It?' (February 22, 1992). Aware of my teacher's prejudice toward the Witnesses, however, I asked a classmate to give her the magazines."

Pasquale describes what happened when, a few days later, he asked his teacher about obtaining the notes he wanted on drug addiction: "She did not reply right away. Rather, she stood up and came to shake my hand. She said that she had not wanted to accept Jehovah's Witnesses' magazines before because she considered them too simple and infantile. After she read them, though, she changed her mind. She said that she found the contents of the magazines to be most useful from a social point of view. She said that she was going to include points from *Awake!* in her thesis."

What about Pasquale's request for notes on drug addiction? "I'll give them to you very willingly," she responded, "but you would do better consulting *Awake!* It is a magazine that deals with worthwhile subjects, and it is useful, even at the university level."

