

Awake!

April 8, 1999

CHILDREN IN CRISIS

WHO WILL PROTECT THEM?

Average Printing 19,288,000
Published in 83 Languages

Children in Crisis —Who Will Protect Them? 3-11

Millions of children worldwide are being abused, and the problem worsens. How can they be protected?



Scala/Art Resource, NY



Lending and Borrowing Between Friends 18

What is the Bible's viewpoint on this matter?



Muscles —Masterpieces of Design 20

How do they work?
How can you take
care of them?

Children In Crisis	3
The Crisis Is Worldwide	5
Who Will Protect Our Children?	8
Crossword Puzzle	12
The Thunderstorm —Awesome King of the Clouds	13
From Stone to Gem	17
A Bitter Defeat for Xerxes	25
Watching the World	28
From Our Readers	30
Show That You Care	31
It Saved the Man's Money	32

CHILDREN IN CRISIS

"Unless the investment in children is made, all of humanity's most fundamental long-term problems will remain fundamental long-term problems."—United Nations Children's Fund.

CHILDREN all over the world are in crisis. Convincing evidence of the magnitude of this tragedy was presented at the World Congress Against Commercial Sexual Exploitation of Children held in Stockholm, Sweden, in 1996 and attended by representatives of 130 countries. For example, it was documented that in many parts of the world, there are millions of young girls, some even as young as ten years of age, who are forced to work as prostitutes.

The Australian *Melbourne University Law Review* noted that such forced prostitution has been called "one of the worst contemporary forms of slavery." After years of physical, mental, and emotional battering, these girls are scarred for life. In most cases the girls submit to this brutality just because they want to eat to stay alive. Death by starvation is the other alternative. Sadly, many of these waifs were forced into prostitution by their own poverty-stricken parents, who sold them for money.

Adding to this obvious tragedy for children is the often hotly debated issue of child labor. In Asia, South America, and else-



FAO photo/F. Botts

where and in some migrant communities in the United States, children even as young as five years of age are forced into what can be termed "slave labor." They work like little robots in appalling conditions that ravage their young bodies and minds. Most have no education, no parental love, no homes to feel secure in, no toys, no parks to play in. Many are callously exploited by their parents.

Child Soldiers and Orphanages

Compounding the tragedy even further, there has been an increase in the use of child soldiers in guerrilla armies. Children may be kidnapped or may be purchased in slave markets and then systematically brutalized, at times by being made to watch murder. Some have even been ordered to kill their own parents or to take drugs in order to heighten their killer instinct.

The following is a sample of the effects of the brainwashing that has been done on thousands of child soldiers in Africa. This chilling conversation took place between a social worker and a boy soldier who was apparently trying to preserve what was left of his innocence:

*"Did you kill? 'No.'
Did you have a gun? 'Yes.'
Did you aim the gun? 'Yes.'
Did you fire it? 'Yes.'*

What happened? 'They just fell down.'"

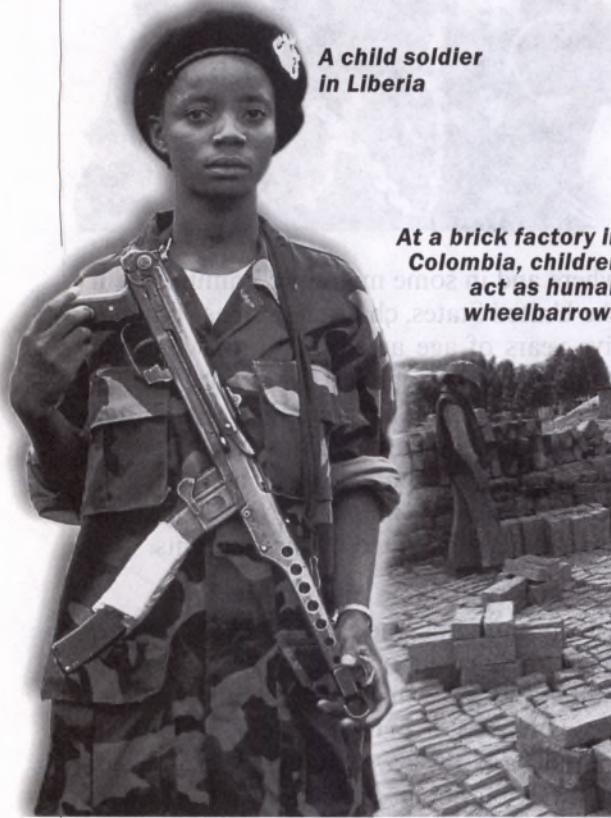
No wonder someone has suggested that the word "infantry" could take on a whole new meaning as one looks at soldiers aged six

and up. It has been reported that even as far back as 1988, child soldiers numbered some 200,000 around the world.

It is said that between the years 1988 and 1992, in an orphanage in an Asian country, 550 children, mostly girls, were selected to die by starvation. A doctor reports: "Those orphans had no pills to kill their pain. Even as they lay dying, they were tied to their beds."

What of Europe? A country there was rocked by the discovery of an international child pornography ring that abducted girls for sexual exploitation. Some unfortunate girls were murdered or starved to death.

These reports certainly indicate that many countries have a real problem with abuse and exploitation of children. But is it an exaggeration to say that this is a worldwide problem? The next article will answer that question.



A child soldier
in Liberia

At a brick factory in Colombia, children act as human wheelbarrows



John Gunston/Sipa Press

UN PHOTO 148000/Jean Pierre Laffont

Awake!

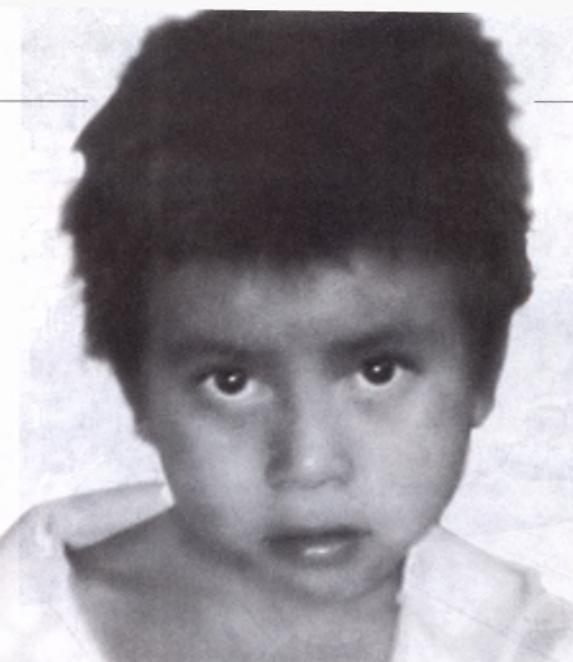
Why Awake! Is Published *Awake!* is for the enlightenment of the entire family. It shows how to cope with today's problems. It reports the news, tells about people in many lands, examines religion and science. But it does more. It probes beneath the surface and points to the real meaning behind current 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.

Unless otherwise indicated, New World Translation of the Holy Scriptures—With References is used.

Awake! (ISSN 0005-237X) is published semimonthly by Watchtower Bible and Tract Society of New York, Inc., 25 Columbia Heights, Brooklyn, NY 11201-2483. Periodicals Postage Paid at Brooklyn, N.Y., and at additional mailing offices. **Postmaster:** Send address changes to *Awake!*, c/o Watchtower, Wallkill, NY 12589. Printed in U.S.A.

THE CRISIS IS WORLDWIDE



THE terrible massacre of street children in Brazil is yet another example of the vulnerability of unwanted children. Reports from that country said that several hundred children were being murdered every year.

There have been brutal attacks on children at Dunblane, Scotland, and Wolverhampton, England, and in many other areas. For example, imagine the suffering of 12-year-old Maria, an Angolan orphan who was raped and became pregnant. Later she was forced to march about 200 miles, after which she gave birth to a premature baby who lived for just two weeks. Maria died a week later, ill and undernourished.

In 1992 a United Nations Children's Fund

(UNICEF) report said that "war on children" is a 20th century invention." According to a 1996 report by UNICEF, the view of some is that 'future generations of the enemy, that is, the enemies' children, must also be eliminated.' A political commentator expressed it this way: "To kill the big rats, you have to kill the little rats."

Two million children have met violent deaths in a recent ten-year period. Another four million have ended up maimed, blinded, or brain damaged from land mines, surviving as best they can along with the many millions who have lost their homes in wars. No wonder a report carried the headline: "Nightmare Vision of War's Brutality to Children."

Semimonthly Languages Available by Mail:

Afrikaans, Arabic, Cebuano, Chinese, Chinese (Simplified), Croatian, Czech, Danish,² Dutch, English,³ Estonian, Finnish,⁴ French, German,⁵ Greek, Hungarian, Igbo, Indonesian, Italian,⁶ Japanese, Korean, Latvian, Malayalam, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish,⁷ Swahili, Swedish,⁸ Tagalog, Tamil, Ukrainian, Zulu

Monthly Languages Available by Mail:

Albanian, Amharic, Chichewa, Cibemba, Ewe, Georgian, Gujarati, Hebrew, Hiligaynon, Hindi, Igbo, Kannada, Lithuanian, Macedonian, Malagasy, Marathi, Myanmar, Nepali, New Guinea Pidgin, Papiamento, Sepedi, Sesotho, Shona, Sinhalese, Telugu, Thai, Tsonga, Tswana, Turkish, Twi, Xhosa, Yoruba
* Audiocassettes also available.

© 1999 Watch Tower Bible and Tract Society of Pennsylvania. All rights reserved.

Offices of the Watch Tower Society in selected countries

America, United States of, Wallkill, NY 12589	New Zealand, P.O. Box 142, Manurewa
Australia, Box 280, Ingleburn, N.S.W. 2565	Nigeria, P.M.B. 1090, Benin City, Edo State
Britain, The Ridgeway, London NW7 1RN	South Africa, Private Bag X2067, Krugersdorp, 1740
Canada, Box 4100, Halton Hills (Georgetown), Ontario L7G 4Y4	Zambia, Box 33459, Lusaka 10101
Ghana, P. O. Box GP 760, Accra	Zimbabwe, P. Bag A-6113, Avondale
Jamaica, Box 103, Old Harbour P.O., St. Catherine	

Changes of address should reach us 30 days before your moving date. Give us your old and new address (if possible, your old address label).



UN/DPI Photo by Armineh Johannes

These atrocities committed on children are a blight on humanity, a sure proof that children are in crisis, not in just a few countries but all over the world. And many children who have been abused have been betrayed as well.

Betrayed by Those They Trusted

Betrayal of a child's trust can leave terrible scars. This is especially true when it is a parent, friend, or mentor who betrays the child's trust. The magnitude of child abuse by parents can be seen from the flood of phone calls received by a hot line after the broadcast of a program called "Scared Silent: Exposing and Ending Child Abuse," which was hosted by talk-show personality Oprah Winfrey in the United States. "The most shocking crisis calls were from young children, calling in fear, wanting to escape the pain of physical or sexual abuse," noted executive producer Arnold Shapiro, as quoted in the journal *Children Today*.

This event did much to dispel the notion that child abusers are big scary strangers. The fact is that "the vast majority of abuse is

**An explosive device
maimed this boy's right hand**

perpetrated by parents and other close relatives," concludes Shapiro. Other research confirms this finding and also indicates that trusted family friends have at times *groomed* the child and family for later, well-planned abuse of the child. Incest is the most shocking betrayal of trust.

Sexual abuse by pedophiles is another threat to children throughout the world. *Trends & Issues in Crime and Criminal Justice* gives this definition: "Paedophilia refers to sexual attraction towards the very young. . . . Paedophilia invariably involves the commission of crimes such as sexual assault, indecency and offences relating to child pornography."

Sickening reports of pedophile rings, which greedily exploit children sexually, are flooding in from all over the world. (See the box on page 7.) The victims are both young boys and young girls. Lured by unscrupulous men, they are sexually abused and then threatened or lavishly spoiled to encourage them to remain with the "club." The men who plan and perform these vile acts are often prominent leaders of the community and sometimes do so with the full knowledge and protection of the police and the judiciary.

Sexual abuse of children by clergymen is also causing outrage. News reports from all over the world reveal the extent of child abuse by clergymen, sometimes even in the name of God. For example, a convicted Anglican priest told his ten-year-old victim that "God was speaking through him [the clergyman], and anything he did or anything [the boy] did was loved by God and therefore right."

In Australia a review of the book *The Battle and the Backlash: The Child Sexual Abuse War* commented on child abuse by clergymen and

others in positions of trust. It said that the organizations involved appeared to be concerned with limiting the damage to their own image and protecting themselves rather than protecting vulnerable children.

Devastating Effects

A child's trust is usually given completely, without reservation. So if that trust is betrayed, it has a devastating impact on an unsuspecting young mind. The publication *Child Abuse & Neglect* notes: "Persons and places that previously signaled safety or support have become associated with danger and fear. The child's world becomes less predictable and controllable."

As a result of such abuse, much of which has gone on for many years, some children have developed social and psychiatric problems later in life, well into adulthood. This betrayal of trust is so damaging because a child has been taken advantage of *because he or she is a child*. Yet, many children who are abused never report the matter—a fact that child abusers rely heavily on.

In recent years, evidence of worldwide child abuse has been growing, so that today there is a mountain of such evidence that can no longer be denied or ignored. But most agree that the elimination of child abuse is a formidable task. So these questions arise: Is there anyone who can really protect our children? How can those of us

Photo ILO/J. Maillard

who are parents protect our God-given heritage and look after the lives of our vulnerable young children? To whom can parents turn for help?



Internet Sting Operation

A few months ago, in one of the largest undercover sting efforts ever carried out against Internet child pornography, police in 12 countries raided the homes of more than 100 suspected pedophiles. From just one pedophile ring based in the United States, they recovered over 100,000 pornographic images of children.

The British detective who coordinated the five-month Internet investigation stated: "The content would absolutely turn the stomach of any right-minded person." Children were of both sexes, some as young as two years of age. Belgian police said that the Internet images were "the most revolting depictions of child porno. . . . It went so far that people abused their own children to be able to present the most striking material." One man kept photos of himself raping his niece and entered these in his computer.

Suspects included teachers, a scientist, a law student, a medical student, a scoutmaster, an accountant, and a university professor.





WHO WILL PROTECT OUR CHILDREN?

IT IS encouraging to know that child abuse is now acknowledged as a worldwide problem. Such initiatives as the Stockholm Congress Against Commercial Sexual Exploitation of Children, attended by representatives from 130 countries, have given attention to this problem.

Additionally, some countries are now passing legislation that outlaws sex tourism and child pornography. Some are even setting up a register of known pedophiles, restricting their easy access to children.

Then there are those who seek a better life for children by passing legislation to protect them. And a few more countries and individuals are refusing to buy products manufactured by means of child labor.

While we all no doubt applaud such efforts to rid society of child abuse, we must be realistic and acknowledge that child abuse has very deep roots in human society. It would be naive to think that a simple solution such as legislation will provide complete protection for our children. Many laws have already been passed, and yet the problem persists. It is really an indictment of the world's delinquent adults that the natural

right to childhood has to be protected by a vast array of laws.

Laws are not the ultimate protection for children. We have only to look at the results of such formidable legislation as the UN Convention on the Rights of the Child, to which many governments are signatories. It is well documented that even many of these governments, pushed to the limits by economic constraints, are not doing enough to stop the exploitation of their children. Child abuse continues to be a major international problem.

Parents Can Do Much

Successful parenting is a demanding job. It calls for sacrifice. But caring parents need to make sure that it is not their children who are sacrificed. *Maclean's* magazine notes that often "parenting is viewed as if it's a hobby." A toy may be discarded or a hobby discontinued, but parenting is a God-given responsibility.

Your being a good parent is one of the most valuable gifts you can give your child, as it will help him to have a happy, secure childhood. Such security does not depend on social or economic status in life. Your

Help your children to learn the Creator's purposes and principles

child needs you—your love and affection, your assurances when he or she feels threatened, and your time. Your child wants to hear your voice telling stories, wants you as a role model, and wants your loving discipline.

On the subject of sexual morality—parents, conduct your family relationships with modesty and respect for your children's minds and bodies. Children learn very quickly what

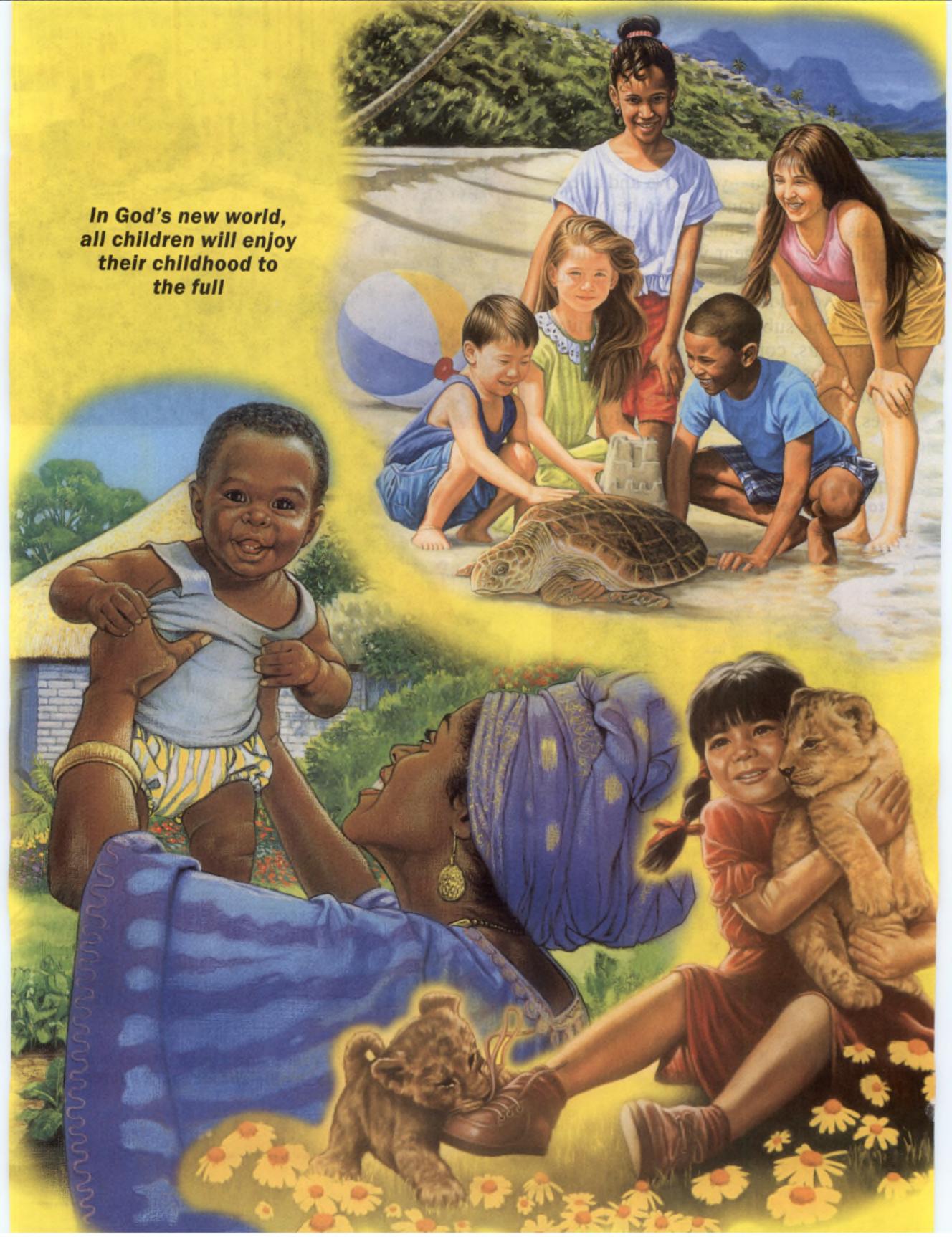


Tactfully teach your children how to react if sexually threatened



Your being a good parent is a valuable gift for your children

**In God's new world,
all children will enjoy
their childhood to
the full**



actions cross the moral boundaries that parents establish with them. They need to be taught how to conduct themselves both inside and outside the home. If you fail to do this, someone else will do it for you, and you may not like the result. Teach children how to react if they are ever morally threatened. Let them know what their private body parts are for, and teach them that these are not to be violated. Tell them how to react if they are approached by anyone who wants to take advantage of them.

At all times know where your children are and who is with them. Who are your child's close friends? Who are your child's caregivers during your absence? Can they be trusted? That does not mean, of course, that a parent has to be suspicious of everyone. Make a proper assessment of the adults in your child's life, looking beyond outward appearances.

Think of the heartbreak of parents who have discovered, too late, that their children have been abused by trusted clergymen, teachers, or even close family members. It would be good for you as a parent to ask yourself, 'Does my church tolerate or cover up child abuse? Is my religion holding firmly to high moral principles?' Answers to such questions could help you to make wise choices in protecting your children.

But above all, try to help them come to know and love the Creator's principles, which will help protect them from harm. When children see their parents' respect for high moral principles, they will more readily follow this good example.

The Only Real Solution

Of course, neither laws nor heavier sentences will in themselves protect our children. The Creator himself through his inspired Word, the Bible, can effectively

bring about chaste conduct, by changing the thinking of beastlike people into that of loving and moral members of any community.

That this is possible has already been shown. There are many who have abandoned former lecherous life-styles. They are now providing living proof of the power of God's Word. But while this is a step in the right direction, the majority of depraved wrongdoers will not change. This is the reason why Jehovah God has promised that all who exploit our children will soon be removed from the earth—along with their philosophies, their lusts, and their greed.—1 John 2:15-17.

Then, in God's new world, when poverty will be no more, all children will enjoy an unhurried and unharassed childhood, which is their God-given right. This will mean not only the end of child abuse but also the end of all the painful memories that mar people's lives today: "The former things will not be called to mind, neither will they come up into the heart."—Isaiah 65:17.

Thus, in God's new world, in a grand way the words of Jesus Christ will take on real meaning: "Let the young children alone, and stop hindering them from coming to me, for the kingdom of the heavens [ruling over the earth, mankind's Paradise home] belongs to suchlike ones."—Matthew 19:14.

IN OUR NEXT ISSUE

When a Mate Is Unfaithful

Exiled in Siberia!

**Outstanding Conference on
Bloodless Surgery in Moscow**

CROSSWORD PUZZLE

Clues Across

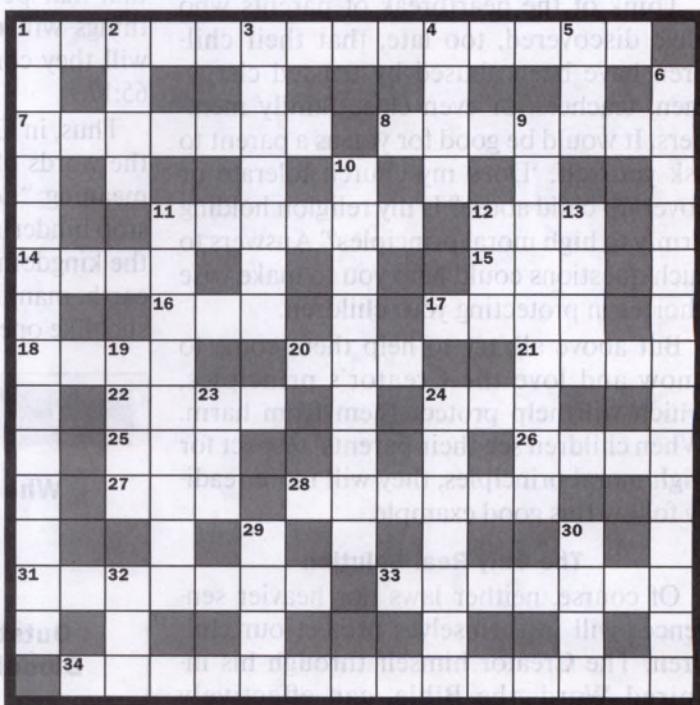
1. Phrase often used to refer to the city of Jerusalem and its inhabitants [3 words] (Zechariah 9:9)
7. A priestly paternal house of which Piltai was the head in the days of Joiakim (Nehemiah 12:12, 17)
8. Seaport town from which Paul departed for Antioch, Syria, at the close of his first missionary tour (Acts 14:25, 26)
11. Part of the people of the ten-tribe kingdom favored his son Tibni to be the sixth king of Israel (1 Kings 16: 21, 22)
12. Son of Abdiel, a family head from the tribe of Gad (1 Chronicles 5: 11, 15)
14. The third vantage point to which King Balak took the prophet Balaam when trying to get him to curse Israel (Numbers 23:28)
15. A son of Jacob whose name means "Good Fortune" (Genesis 30:11)
16. Assistance (Acts 9:27)
17. The Caesar to whom Paul appealed and who later ordered his death (See Acts 25:11, 21, footnote.)
18. This had to be added to anything offered to Jehovah on the altar (Leviticus 2:13)
20. The good news must be preached first before this comes (Matthew 24:14)
21. The month in which Nehemiah completed the 52-day project of reconstructing Jerusalem's walls (Nehemiah 6:15)
22. Women came to treat Jesus' body with these (Luke 23:55, 56)
24. The month in which Solomon completed the construction of the temple (1 Kings 6:38)
25. To his servants' surprise, David did this upon learning that his firstborn son by Bath-sheba had died (See 2 Samuel 12:20.)
26. The wife of one's uncle (Leviticus 18:14)
27. Excavated (Mark 2:4)
28. Second named of Levi's three sons (Genesis 46:11)
31. A city of Dan that was given to the Levites (Joshua 19:44; 21:20, 23)
33. A boundary city of Issachar assigned to the Gershonites (Joshua 21:27, 28)

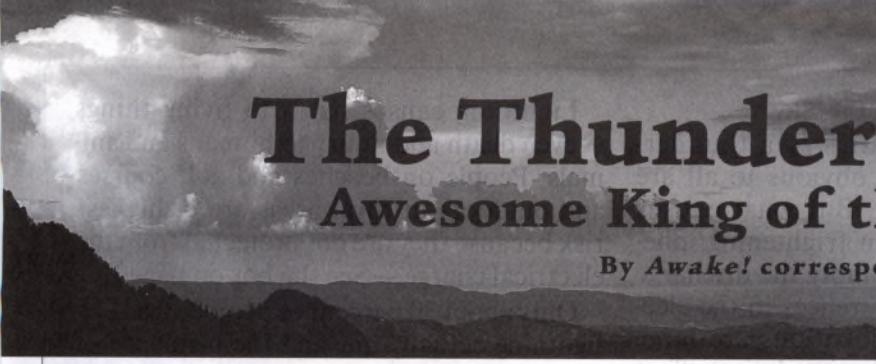
34. Expression signifying a source of refreshment and plenty [2 words] (Micah 5:7)

Clues Down

1. Why one man exhibited superhuman strength [2 words] (Mark 5:3, 4, 15)
2. The sons of this descendant of Saul were outstanding archers (1 Chronicles 8:40)
3. If discipline has done this to you, it will result in righteousness (Hebrews 12:11)
4. Sudden bursts of emotion (Proverbs 22:24)
5. Unlike most other birds, its eyes face forward, enabling it to view an object with both eyes at once (Psalm 102:6)
6. These will be of no benefit in the day of God's fury [2 words] (Proverbs 11:4)
9. A son of Asaph who in David's time served with the musicians and sing-
- ers at Jehovah's house (1 Chronicles 25:1, 2)
10. We should be paying this to the prophetic word (2 Peter 1:19)
11. Thankfulness (Luke 17:9)
12. A person who is of this can speak for himself (John 9:21)
13. Though it was made by his grandmother, King Asa cut it down and burned it (1 Kings 15:13)
19. Jesus said that his is light (Matthew 11:30)
23. The right one became the portion of the priest who offered the communion sacrifice (Leviticus 7:32, 33)
24. A Benjaminite warrior who joined up with David at Ziklag (1 Chronicles 12:1, 5)
29. The place where Moses viewed the Promised Land and died (Deuteronomy 32:49, 50)
30. Employ (Matthew 20:1)
32. The number of witnesses needed to establish a matter (2 Corinthians 13:1)

Crossword Solutions Page 14





The Thunderstorm Awesome King of the Clouds

By *Awake!* correspondent in Australia

MANY people have been fascinated by clouds since they were children. One 80-year-old recalls how in early childhood he would often lie in the grass watching clouds "parade across the sky," as he puts it. He remembers that he often wondered what clouds were made of. Was it cotton? Why did each one look so different? That one looked like a sailing ship, that one like a prancing horse. And then came a billowing castle. They continued to delight his childish imagination as they floated across the sky in an ever-changing array of shapes and sizes. To this day, he says, he still enjoys watching as clouds seem to "play charades" in the sky. Perhaps you too share this simple pleasure.

However, probably the most impressive and awesome of clouds are the ones that can "talk." Their name is cumulonimbus, or thunderhead. Dark and foreboding, these clouds might reach ten miles or even higher into the sky, and they are the ones that bring thunderstorms. Storm clouds can sparkle with lightning and growl out warning peals of thunder as they build up in the sky. At night they may put on a dazzling sound-and-light show that surpasses any man-made fireworks display. They blow and shed their rain and hail and then move on, leaving behind the smell of fresh, clean rain, often on a previously parched earth.

How Thunderstorms Develop

In recent times man has been able to view planet Earth from space. He sees a carpet of cloud hovering over much of its surface. Author Fred Hapgood informs us that "at any given moment half the globe's surface, 100 million square miles, is covered with [clouds]—sheetlike, rounded, quilted, filamentous, lacy, puffy, in all degrees of luminescence and opacity, blossoming, spreading, sailing and fading all around the world." Thunderstorms form part of this cloud mass—in fact, up to 15,000,000 thunderstorms occur on earth each year, and about 2,000 thunderstorms are active at all times.

A thunderstorm develops when dense cold air overlies moist air that is less dense. A trigger, such as solar heating, frontal weather, or rising terrain, causes the warm moist air to begin to rise through the cold air. Air currents develop, and heat energy stored in the air and the water vapor is then converted into wind and electrical energy.

The atmospheric conditions needed to form thunderstorms are most common in the lower latitudes. This explains why South America and Africa are the most thunderstorm-prone continents and why Central Africa and Indonesia have long been considered to have the world's highest incidence of thunderstorm activity. The accepted record is 242 thunderstorm days per year, recorded at Kampala, Uganda. However, thunderstorms also occur in many other parts of the earth.

Fireworks in the Sky

The two characteristics of a thunderstorm that are clearly obvious to all are thunder and lightning. But what causes these spectacular, often frightening, phenomena? Lightning is simply the discharge produced when the differences in the electrical charges in two locations are large enough to overcome the insulating effect of the air. This can occur within a cloud, between clouds, or between clouds and the ground. Lightning causes air to be heated momentarily to amazingly high temperatures—as high as 54,000 degrees Fahrenheit at the moment the stroke discharges its electrical charge.

Lightning can be classified as either streak lightning, forked lightning, or sheet lightning. If the discharge is visible as a distinct channel, it is streak lightning. If the channel is visibly divided or branched, then it is called forked lightning. If the flash is within the cloud, or intracloud, it is known as sheet lightning. Authorities tell us that most of the lightning we see is cloud-to-ground lightning.

CROSSWORD SOLUTIONS

D	A	U	G	H	T	E	R	O	F	Z	I	O	N	
E	L			R				I			W		V	
M	O	A	D	I	A	H		A	T	T	A	L	I	A
O	M			I	A		S	S					L	
N		G	I	N	A	T	H		A	H	I		U	
P	E	O	R	E	T			G	A	D		A		
O		A	I	D	E	N	E	R	O		B			
S	A	L	T		E	N	D		E	L	U	L		
S	O	I	L	S	T	B	U	L					E	
E	A	T	E		I	E		A	U	N	T			
S	D	U	G		K	O	H	A	T	H			H	
S	D		N	N	L			H			I			
E	L	T	E	K	E	H		K	I	S	H	I	O	
D	W		B			A		R		G				
C	O	P	I	O	U	S	S	H	O	W	E	R	S	

Lightning causes harm to living things—even death and injury to humans and animals. People on beaches and golf courses and outdoors in rural areas are at highest risk because they are not protected from the electrical charge.—See the box on page 15.

Only about 30 percent of people struck by lightning actually die, and the incidence of long-term injury is low when first aid is applied promptly. However, contrary to popular myth, lightning can and often does strike more than once in the same place!

Lightning strikes start many fires. These can devastate large areas of land. Approximately 10 percent of forest fires in the United States are caused by lightning. These result in the burning of more than 35 percent of the total forest and bushland consumed by fire in that country.

But lightning strikes are also beneficial. For example, forests benefit in several ways. Fires that are started by lightning reduce ground cover in low-temperature fires. This can reduce the risk of more damaging high-temperature fires reaching the tree crowns. Lightning also brings about a beneficial change to gaseous nitrogen, which as a gas cannot be used by plants. Lightning converts this gas into nitrogen compounds, essential to the formation of plant tissues and the development of seeds, which provide proteins vital to animal life. It has been estimated that from 30 to 50 percent of the nitrogen oxides present in rainfall are produced by lightning and that globally 30 million tons of fixed nitrogen are produced in this manner each year.

A Storm's Greatest Benefit

A thunderstorm can release an enormous amount of water. The main reason for huge quantities of rainfall within a short time is that the intense updraft of the severe storm suspends a large amount of water and then

Lightning Strike Precautions

Emergency Management Australia suggests the following precautions during a thunderstorm.

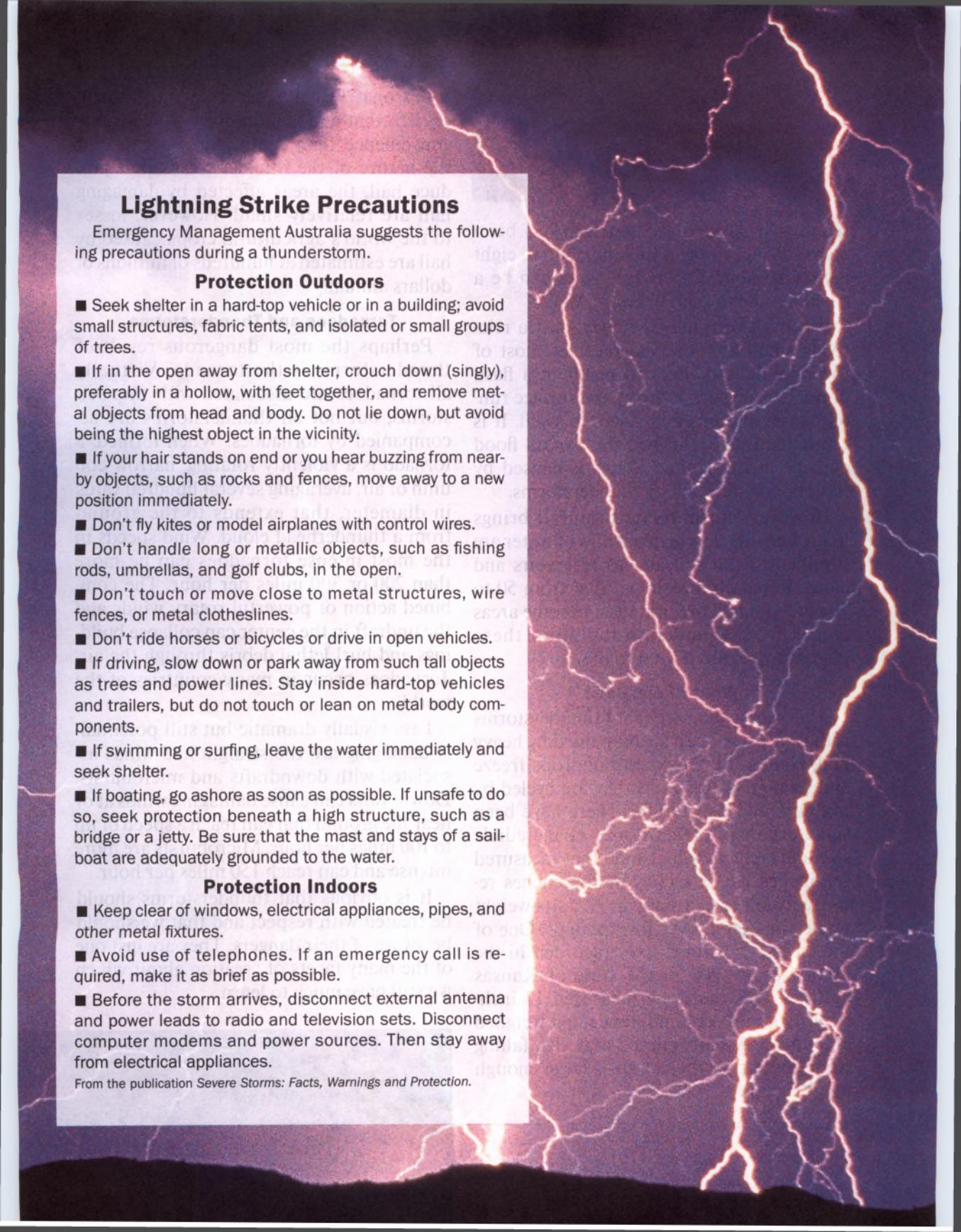
Protection Outdoors

- Seek shelter in a hard-top vehicle or in a building; avoid small structures, fabric tents, and isolated or small groups of trees.
- If in the open away from shelter, crouch down (singly), preferably in a hollow, with feet together, and remove metal objects from head and body. Do not lie down, but avoid being the highest object in the vicinity.
- If your hair stands on end or you hear buzzing from nearby objects, such as rocks and fences, move away to a new position immediately.
- Don't fly kites or model airplanes with control wires.
- Don't handle long or metallic objects, such as fishing rods, umbrellas, and golf clubs, in the open.
- Don't touch or move close to metal structures, wire fences, or metal clotheslines.
- Don't ride horses or bicycles or drive in open vehicles.
- If driving, slow down or park away from such tall objects as trees and power lines. Stay inside hard-top vehicles and trailers, but do not touch or lean on metal body components.
- If swimming or surfing, leave the water immediately and seek shelter.
- If boating, go ashore as soon as possible. If unsafe to do so, seek protection beneath a high structure, such as a bridge or a jetty. Be sure that the mast and stays of a sailboat are adequately grounded to the water.

Protection Indoors

- Keep clear of windows, electrical appliances, pipes, and other metal fixtures.
- Avoid use of telephones. If an emergency call is required, make it as brief as possible.
- Before the storm arrives, disconnect external antenna and power leads to radio and television sets. Disconnect computer modems and power sources. Then stay away from electrical appliances.

From the publication *Severe Storms: Facts, Warnings and Protection*.





releases it suddenly. Such rain has been measured as falling at the rate of up to eight inches an hour. Of course, there can be a negative side to such heavy rainfall.

When a storm moves slowly, only a relatively small area of land receives most of the rainfall, and this can result in a flash flood. During such a storm, the surface runoff causes streams and rivers to swell. It is estimated that about one third of all flood damage in the United States is caused by flash floods spawned by thunderstorms.

However, storm-related rainfall brings many benefits. Large quantities of water are supplied to the soil and to reservoirs and dams. Research has shown that from 50 to 70 percent of all precipitation in some areas comes from thunderstorms, so in these places storm rain is vital to life.

What About Hail?

A very damaging aspect of thunderstorms is that they are often accompanied by heavy hail. Hail is formed when raindrops freeze and then grow in size as they are cycled by updrafts and downdrafts. There have been some accounts of hailstones of incredible size and weight. A hailstone that measured ten inches by six inches by five inches reportedly fell in Germany in 1925. Its weight was estimated at over four pounds. One of the largest hailstones ever recorded in the United States fell in the state of Kansas in 1970. This hailstone measured 17 inches at its largest circumference and weighed 27 ounces. A hailstone of that size falling from high up in the clouds is large enough to kill a man.

Fortunately, hail is generally much smaller than that and is more likely to cause inconvenience than death. Also, because of the nature of the thunderstorms that produce hail, the areas affected by damaging hail are relatively small. However, losses to the world's agricultural crops caused by hail are estimated at hundreds of millions of dollars annually.

Tornadoes and Thunderstorms

Perhaps the most dangerous result of thunderstorms is the tornado. Virtually all tornadoes are associated with thunderstorms, but not all thunderstorms are accompanied by tornadoes. When formed, a tornado is a violently rotating, narrow column of air, averaging several hundred yards in diameter, that extends to the ground from a thunderhead cloud. Wind speeds in the most intense tornadoes can be more than 200 or 300 miles per hour. The combined action of powerful rotary winds and the updraft in the center can collapse buildings and hurl lethal debris through the air. Tornadoes occur in many countries of the world.

Less visually dramatic but still potentially damaging are the straight-line winds associated with downdrafts and microbursts. Downdrafts can cause damaging winds at or near the ground that can reach a speed of up to 100 miles per hour. Microbursts are more intense and can reach 150 miles per hour.

It is obvious that thunderstorms should be treated with respect and that we should be aware of their dangers. They are just one of the many facets of creation about which we still have much to learn.





From Stone to Gem

By Awake! correspondent in Belgium



BECAUSE of its great beauty, it has been a favorite gem for ages. Because of its hardness—it is the hardest natural substance known to man—it is widely used in tools and machinery. This fascinating stone is the diamond.

Some famous diamonds are surrounded by intriguing tales. The one named Koh-i-noor, meaning "Mountain of Light," was found seven centuries ago in India. Originally, the lumpy stone was 191 carats, but it was later cut to 109 carats.* Then, too, there is the Cullinan, which is part of the British crown jewels and is the largest diamond ever found and cut.

From a Rock to a Gem

Diamonds do not start as beautiful gems. Most have to be dug out of the ground. On the average, 250 tons of dirt must be moved and sifted to obtain one carat of pure diamond. Of the 40 to 50 million carats mined every year, only a small fraction are suitable for jewelry.

Rough diamonds must be sorted for size, purity, color, and shape. In the rough, practically every diamond has impurities. But sometimes a section may be free or relatively free of impurities. In these cases the part that has no impurities is isolated by cleaving or sawing. When large and expensive stones are involved, craftsmen have been known to deliberate for months before making any cuts. This is easy to understand when you consider that one single mistake when cleaving can greatly reduce the value of the diamond or even ruin the entire stone.

Finally, polishing gives the diamond its facets, which must harmonize with its shape. These facets endow the gem with the capacity to reflect light, giving the diamond the brilliance for which it is so well-known.

The next time a diamond captures your attention with its brilliance and beauty, remember the hard work of the miners and the precision and skills of the craftsmen. Without them the diamond could never have been transformed from an unattractive glassy rock into a beautiful jewel.

* A carat is a unit of weight equal to one fifth of a gram.

Lending and Borrowing Between Friends

"THE WICKED ONE IS BORROWING AND DOES NOT PAY BACK, BUT THE RIGHTEOUS ONE IS SHOWING FAVOR AND IS MAKING GIFTS."—PSALM 37:21.

NEITHER a borrower, nor a lender be; for loan oft loses both itself and friend." So wrote the English playwright William Shakespeare, reiterating wisdom as old as the ages. Certainly, few elements of human relations are as potentially explosive as borrowing or lending money. Even with the best-laid plans and the most sincere intentions, things do not always turn out as expected.

—Ecclesiastes 9:11, 12.

Circumstances may arise that make it difficult or impossible for the borrower to fulfill his obligations. Or the lender may suddenly find himself needing the money he lent. When such things happen, as Shakespeare pointed out, friendships and relationships can be in jeopardy.

Of course, an individual may have valid reasons for borrowing some money. Faced with a financial setback caused by a serious accident or the loss of a job, he may see it as his only recourse. The Bible encourages those who can to help ones in need when it is in their power to do so. (Proverbs 3:27) This may include lending money. How, though, should Christians who enter into such an arrangement view their obligations?

Principles to Consider

The Bible is not a financial guidebook. It does not discuss all the details that borrowing or lending may entail. Such issues as whether to charge interest or not and how much to charge are left up to the individuals

involved.* What the Bible does provide, however, are clear, loving principles that should govern the attitudes and behavior of anyone borrowing or lending.

Consider principles that apply to the borrower. The apostle Paul exhorted Christians not to be "owing anybody a single thing, except to love one another." (Romans 13:8) While Paul was stating a broad principle here, his advice can certainly be taken as a caution against incurring debt. Sometimes it is better to go without than to owe money to someone else. Why? Proverbs 22:7 explains that "the borrower is servant to the man doing the lending." The

* For additional information on the matter of charging interest on loans, please see the October 15, 1991, issue of *The Watchtower*, pages 25-8.

Scala/Art Resource, NY



"The Money Changer and His Wife" (1514),
by Quentin Massys

borrower must realize that until the money is paid back, he is under obligation. In principle, his resources are not entirely his own. Paying his debt in harmony with the terms agreed upon must have a high priority in his life, or difficulties will likely arise.

For example, as time passes without due repayment, the lender may become irritated. Things the borrower does such as buying clothes, eating at restaurants, or going on vacation might be viewed with suspicion by the lender. Resentment could build up. The relationship between them and even between their families may become strained or worse. Such may be the sad consequences if the borrower does not abide by his word.—Matthew 5:37.

But what if the borrower is suddenly prevented from meeting his commitment by a circumstance beyond his control? Would this cancel the debt? Not in itself. The psalmist says that the righteous person “has sworn to what is bad for himself, and yet he does not alter.” (Psalm 15:4) In such a case, the loving and wise thing to do would be for the borrower to explain the situation to the lender immediately. Then they can agree on some alternate arrangements. This will ensure peace, and it will please Jehovah God.—Psalm 133:1; 2 Corinthians 13:11.

In truth, a person reveals a lot about himself by the way he handles his debts. A nonchalant, casual attitude toward repayment reveals a lack of concern for others. In effect, a person with that attitude shows selfishness—his desires and wishes come first. (Philippians 2:4) A Christian who deliberately and knowingly refuses to pay his debts endangers his standing before God, and his actions may indicate a greedy, wicked heart.—Psalm 37:21.

The Lender

While the major obligation rests on the one borrowing, there are also principles that apply to the one doing the lending. The Bible indicates that if we have the ability to help needy ones, we should do so. (James 2:14-16) But that does not mean that an individual is obligated

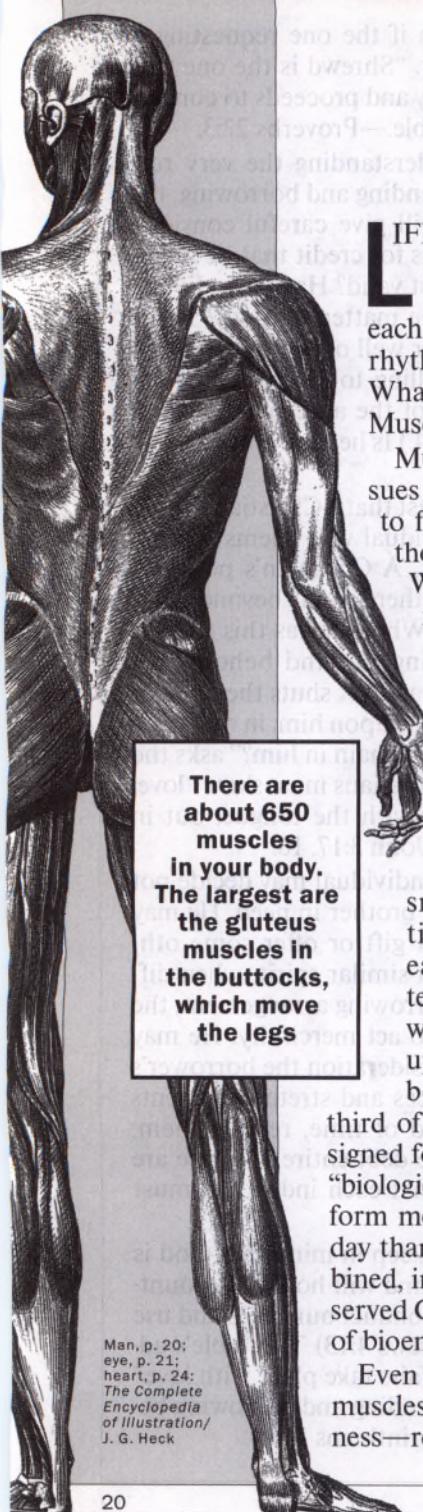
to lend money, even if the one requesting it is a spiritual brother. “Shrewd is the one that has seen the calamity and proceeds to conceal himself,” says the Bible.—Proverbs 22:3.

Knowing and understanding the very real pitfalls involved in lending and borrowing, the discerning person will give careful consideration to any petitions for credit that he might receive. Is the request valid? Has the individual asking thought the matter through? Is the prospective borrower well organized and well spoken of? Is he willing to sign a document outlining the terms of the agreement? (Compare Jeremiah 32:8-14.) Is he really prepared to repay?

This is not to suggest that a Christian should refuse a needy individual who seems to be a potential credit risk. A Christian’s personal obligations toward others go far beyond good business practices. “Whoever has this world’s means for supporting life and beholds his brother having need and yet shuts the door of his tender compassions upon him, in what way does the love of God remain in him?” asks the apostle John. Yes, Christians must show “love, neither in word nor with the tongue, but in deed and truth.”—1 John 3:17, 18.

In some cases an individual may decide not to lend money to his brother in need. He may prefer to give him a gift or offer some other form of help. In a similar spirit, when difficulties arise in a borrowing arrangement, the lender may choose to act mercifully. He may wish to take into consideration the borrower’s changed circumstances and stretch payments over a longer period of time, reduce them, or even eliminate the debt entirely. These are personal decisions that each individual must make for himself.

Christians should keep in mind that God is observing all things and will hold us accountable for the way we conduct ourselves and use our resources. (Hebrews 4:13) The Bible’s advice to let all our “affairs take place with love” certainly applies to lending and borrowing between friends.—1 Corinthians 16:14.



MUSCLES MASTERPIECES OF DESIGN

LIFE is sustained through movement. For example, your chest rises and falls with each breath, and your heart beats rhythmically, keeping you alive. What causes these movements? Muscles!

Muscles are tough, elastic tissues that enable your body parts to function and to express your thoughts and feelings in actions. Whether the action is smiling, laughing, crying, talking, walking, running, working, playing, reading, or eating, muscles are involved. It is hard to think of anything you do that does not involve a muscle.

There are about 650 muscles in your body. The largest are the gluteus muscles in the buttocks, which move the legs

There are about 650 muscles in your body. The smallest are attached to the tiniest bones, found in the ear. The largest are the gluteus muscles in the buttocks, which move the legs. Making up about one half of a man's body weight and about one third of a woman's, muscles are designed for work. They are considered "biological engines," and they transform more energy into motion each day than all man-made engines combined, including the automobile, observed Gerald H. Pollack, a professor of bioengineering.

Even when you are resting, your muscles remain in a state of readiness—ready to be called into action.

At any given time, some fibers in each muscle are contracted. Without this slight contraction, your jaw would hang open and your body's internal organs would have little support. Even while you are standing or sitting, your muscles make slight adjustments to help maintain your posture or to keep you from falling off your chair.

Types of Muscles

There are three types of muscles in your body. Each performs a different job. One is the cardiac muscle, which pumps the heart. The heart muscle rests half its life, for after each contraction it must relax until the next contraction.

Another type of muscle is smooth muscle. Smooth muscles wrap themselves around most of your internal organs, including blood vessels. Like heart muscle, whose action is involuntary, smooth muscles are not consciously controlled. They perform such vital functions as moving fluids through your kidneys and bladder, pushing food through your digestive tract, regulating the flow of blood through your vessels, shaping your eye lenses, and dilating the light aperture of your pupils.

Most of your 650 muscles are skeletal muscles. These carry out your voluntary movements. You learn to control these muscles from birth. A baby, for example, learns to move its arms and legs so that it can walk and balance. Because muscles can only contract, skeletal muscles work in pairs.

Man, p. 20;
eye, p. 21;
heart, p. 24;
The Complete Encyclopedia of Illustration/
J. G. Heck

When one muscle contracts, the other relaxes. Without this teamwork, every time you scratched your head, you would have to let gravity pull your arm down. Instead, your triceps, the muscle that is the partner of your biceps, contracts, enabling you to straighten out your arm quickly.

Muscles vary in size and shape. Some are long and slender, such as the hamstring muscles of the legs. Others are heavy and thick, such as the gluteus muscles in the buttocks. All are designed to allow you to move. The rib cage would be rigid if it were not for muscles that fill the gaps between the ribs. These enable the chest wall to move like an accordion, helping you to breathe. Much like the layers in plywood, abdomen muscles are arranged in sheets at different angles, to prevent your abdominal organs from falling out.

Muscle and Tendon Cooperation

Muscles that pull on your bones are attached to them by tough, white cord-like tissues called tendons. Tendons extend far inside muscles and link up with connective tissue that surrounds muscle fiber. Connective tissue enables the forces generated inside your muscles to tug on the tendon and move your bones. The most powerful tendon, the Achilles tendon, is attached to one of the strongest muscles of your body, in your calf. Calf muscles act as the body's shock absorbers. When you walk, run, or jump, they withstand pressures of more than a ton.

The versatility of your hand is another example of muscle and tendon cooperation. Twenty pairs of muscles found in your forearm latch onto your multijointed hand and finger bones by long tendons that pass under a fibrous

wristband. These together with 20 more muscles that line your palm and fingers give your hand the amazing dexterity needed to assemble the delicate inner workings of a fine watch or to grasp an ax handle to chop wood.

Over 30 Facial Muscles

More than any other feature of your body, the face expresses your personality. To accommodate a huge variety of facial expressions, the Creator has placed a large concentration of muscles in your face—over 30 in all. Why, it takes 14 muscles just to make you smile!

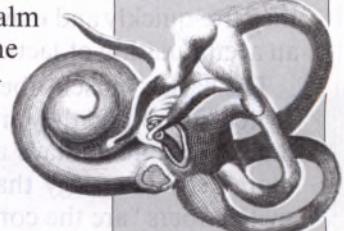
Some facial muscles are powerful, such as those attached to your jaw, which can exert 200 pounds of force to chew your food. Others are delicate yet durable, such as the muscles that control your eyelids when you blink, bathing your eyes with fluid that washes off dirt and germs more than 20,000 times a day.

Amazing Design

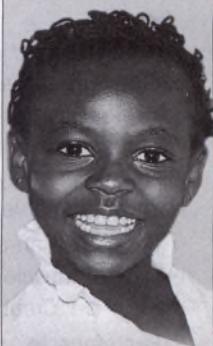
Each muscle is designed to contract smoothly. Skeletal muscles must have their contractions tailored so that the same amount of strength is not used when picking up a feather as when lifting a 20-pound weight. How is this achieved? Let us see.

All muscles are made up of individual cells. Because muscle cells are stretched out, they are referred to as fibers. Some fibers are lighter in color, others darker. The lighter ones are fast-contracting, or fast-twitch, fibers. These are utilized when you need short bursts of energy, such as when picking up a heavy load or running a 100-yard dash. Fast-twitch muscle fibers are powerful, and glycogen, a

(Enlarged 2X)



The smallest muscles are attached to the tiniest bones, found in the ear



It takes 14 muscles just to make you smile!



Muscles let you blink more than 20,000 times a day

sugar, is the energy source that fuels them. However, they tire quickly and may even cramp or ache because of an accumulation of lactic acid.

The darker muscle fibers are slow-contracting, or slow-twitch, fibers, and they are driven by oxygen metabolism. Since these fibers have a richer blood supply and have more aerobic energy than fast-contracting fibers, slow-twitch fibers "are the cords of endurance."

Another type of fiber is slightly darker than the pale fast-contracting fibers. This fiber is similar to them but is resistant to fatigue. Because this type utilizes well both sugar and oxygen as fuel, it is likely involved when you do prolonged, intense work.

There is a mixture of these types of fibers in each individual and within different muscles. Long-distance runners, for example, may average 80 percent slow-twitch fibers in their leg muscles, while sprinters can average better than 75 percent of the fast-twitch kind.

Activated by Nerves

All muscle fibers are activated by nerves. When these send impulses to your muscles, the muscles respond with a twitch, or contraction. Yet, not

THE MARVEL OF MUSCLE CONTRACTION

A muscle's action may appear simple. But the mechanism of contraction is awesome. Professor Gerald H. Pollack says: "I have come to stand in awe of the esthetic in nature's design. The conversion of chemical energy into mechanical energy is accomplished so adroitly—it is tempting to say so intelligently—that one is drawn to marvel."

Let us use an electron microscope to look at the intricate operation of muscle contraction and learn more about this masterpiece of our Creator's design.

Each muscle cell, or fiber, is actually a bundle of smaller fibers called myofibrils that are arranged in parallel form. Each myofibril contains thousands of thinner myofilaments. Some myofilaments are thicker, some thinner. The thicker contain myosin, and the thinner contain actin, proteins that help the muscle cell contract.

On the surface of each muscle fiber is a hollow. The nerve fiber, branching off from the spine, ends there and fits into the hollow. Our muscles swing into motion when the brain gives the command and the message, fired across millions of nerve cells of the central nervous system, reaches the nerve ending. As each nerve ending is stimulated, more than 100 tiny sacs burst open, spilling a chemical that amplifies the nerve's impulse as it comes in contact with the membrane of the muscle cell. This sets off a wave of electrical activity that excites the whole muscle cell, causing the cell's membrane to release electrically charged calcium ions, which spark the mechanical process of contraction.

Calcium ions now spread through the whole muscle fiber via a network of fine tubes and come into contact with various proteins. Somehow the calcium's action on these proteins causes protect-

ed protein sites along the thin actin filament shaft to be uncovered or exposed.

At the same time, pairs of rounded buds, crowned with a high-energy compound called ATP, projecting from the thicker myosin filaments, move into action. One of the buds of the myosin filament head latches onto one of the now-exposed active sites on the actin filament, forming a cross bridge. The other bud splits the ATP and releases enough energy for the cross bridge to pull or slide the actin filament alongside or over the myosin filament. Like a team working hand over hand to pull a rope, the myosin heads release their grip and reattach themselves farther along the actin shaft, all the while propelling the actin filament toward the center of the myosin filament. This action is repeated until the contraction is complete. The entire chain reaction takes place in just a few thousandths of a second!

With the contraction completed, the calcium returns to its source in the muscle cell's membrane, the exposed sites along the actin filament shaft are once again covered up, and the muscle fiber relaxes until it receives stimuli again. Yes, 'in a fear-inspiring way we are wonderfully made!' —Psalm 139:14.

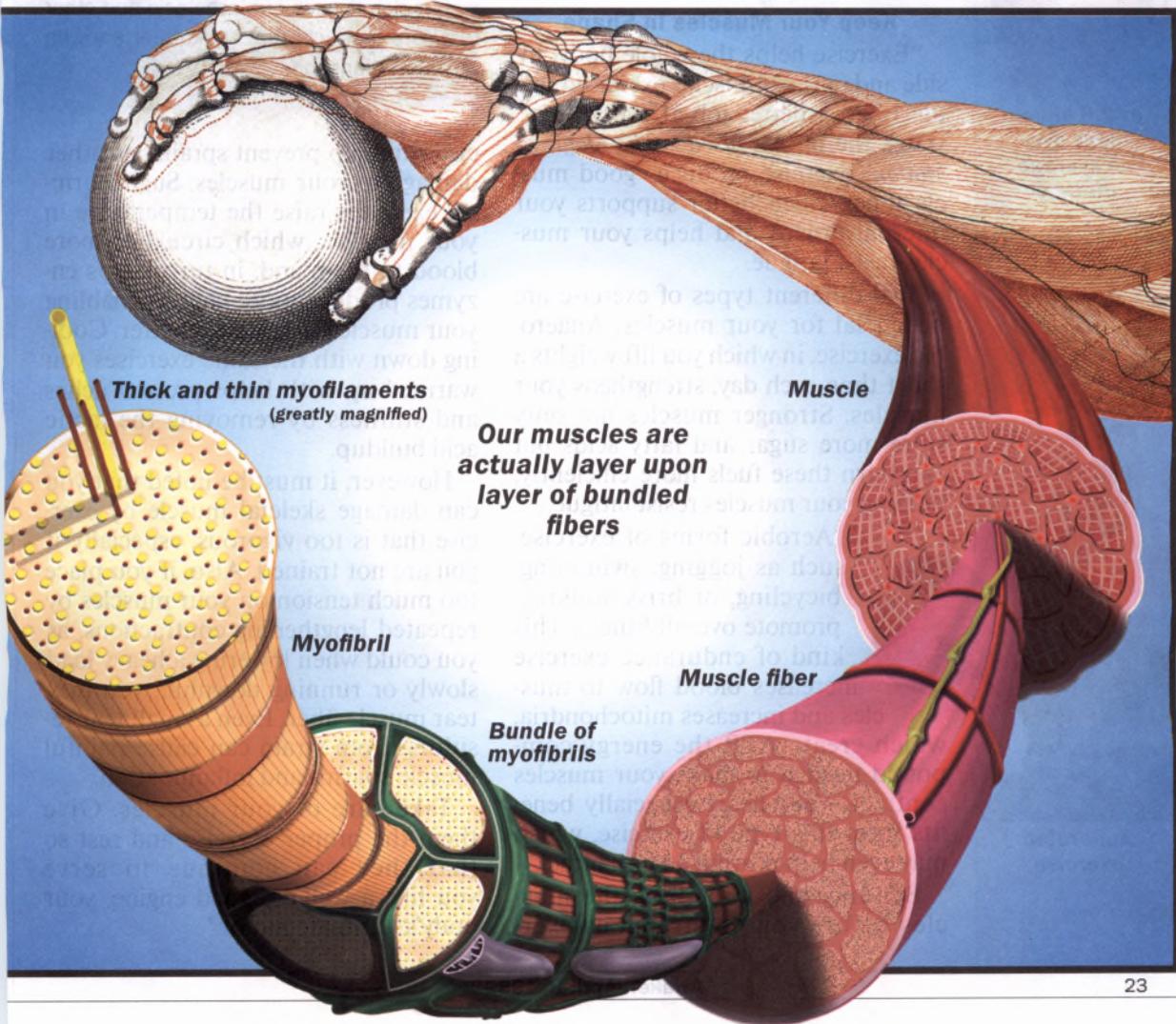
all muscle fiber in a given muscle contracts at once. Rather, muscle fiber is organized into motor units. In a motor unit, a single nerve is attached to and controls many fibers.

Some motor units, such as those in your leg muscles, are composed of more than 2,000 fibers to a single nerve. But the motor units in your eye control only three fibers each. Having a smaller group of fibers in a unit and more units per muscle allows for more coordinated, finer movements, such

as those needed for threading a needle or playing the piano.

When you pick up a feather, only some motor units contract. When you lift a heavy object, special sensory organs in your muscle fiber send a message with lightning speed to the brain and call more motor units into action, thus increasing the force you use to lift the load. When you walk slowly, only some motor units are activated; whereas, when you run, many more are stimulated and with greater frequency.

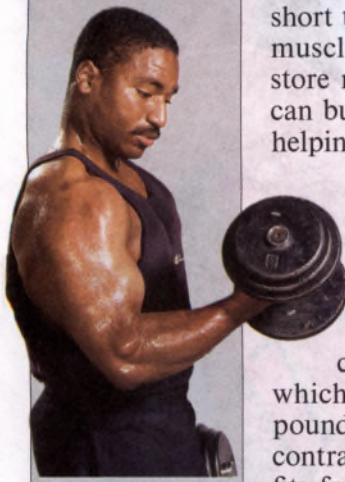
Your heart muscle differs from skeletal muscle in that it contracts in an all-or-nothing fashion. When one cell is stimulated in the heart muscle, the message is spread



Your heart muscle contracts and relaxes about 72 times a minute,



or 2.6 billion times over an average lifetime



Anaerobic exercise

to all the cells and they all become fired up at once, resulting in the entire muscle contracting and then relaxing, about 72 times a minute.

Smooth muscles act much the way the heart muscle does—once the contraction begins, the entire organ contracts. But smooth muscles can remain contracted without tiring for a longer time than heart muscles. Smooth muscles hardly make their presence known, unless you experience an occasional hunger pain or the forceful contractions of childbirth.

Keep Your Muscles in Shape

"Exercise helps the whole body, inside and out.... Muscles exercised regularly do a better job at everything," states the book *Muscles: The Magic of Motion*. Exercise produces good muscle tone, which better supports your internal organs and helps your muscles resist fatigue.

Two different types of exercise are beneficial for your muscles. Anaerobic exercise, in which you lift weights a short time each day, strengthens your muscles. Stronger muscles not only store more sugar and fatty acids but can burn these fuels more efficiently, helping your muscles resist fatigue.

Aerobic forms of exercise, such as jogging, swimming, bicycling, or brisk walking, promote overall fitness. This kind of endurance exercise increases blood flow to muscles and increases mitochondria, which create ATP, the energy compound needed to make your muscles contract. Your heart especially benefits from this type of exercise, which may even help prevent a heart attack.

Bending and stretching the muscles before you do strenuous ex-

Muscles and Nutrition

Good nutrition is a key factor in maintaining healthy muscles. Foods rich in calcium, such as dairy products, and in potassium, such as bananas, as well as citrus and dried fruits, deep-yellow vegetables, nuts, and seeds help to regulate muscle contractions. Whole-grain breads and cereals supply iron and B-complex vitamins, especially B₁, which is crucial in converting carbohydrates, proteins, and fats into the energy fuel your muscles need. Drinking plenty of water not only helps to maintain your electrolyte balance but also flushes out lactic acid and other waste products that could interfere with muscle function.

cise can help prevent sprains or other damage to your muscles. Such warm-up exercises raise the temperature in your muscles, which circulates more blood to them and, in turn, helps enzymes produce more energy, enabling your muscles to contract better. Cooling down with the same exercises you warmed up with helps prevent aches and stiffness by removing the lactic acid buildup.

However, it must be noted that you can damage skeletal muscle by exercise that is too vigorous, especially if you are not trained. Also, if you place too much tension on your muscles by repeated lengthening contractions, as you could when lowering a heavy load slowly or running downhill, you may tear muscle fiber. Even a small tear resulting from strain can cause painful muscle spasms and inflammation.

Take care of your muscles. Give them the proper exercise and rest so that they can continue to serve you like a well-designed engine, your body's "ultimate motor."

A BITTER DEFEAT FOR XERXES

BY AWAKE! CORRESPONDENT IN GREECE

THE unsuspecting traveler is intrigued by the hot springs and the geysers that spit sulfur gases. He may be surprised to learn that the coastal plain—at this point called Thermopylae, meaning “Hot Gates”—was once an almost impassable strip of land. But he may be even more intrigued by the realization that here, as well as more to the south at the island of Salamis, he can find concrete evidence of the remarkable accuracy of Bible prophecy.

Indeed, viewed in retrospect and in the light of fulfillment, the details of certain prophecies in the Bible book of Daniel that relate to these areas are simply astounding. They provide convincing proof that the Bible is the Word of God. In Daniel chapter 11, we find a striking example. The prophetic information was given to Daniel “in the first year of Darius the Mede,” about 538 B.C.E. (Daniel 11:1) But the fulfillment of what was then revealed spanned a period of many centuries.

Daniel 11:2 prophesied regarding a certain Persian king: “Look! There will yet be three kings standing up for Persia, and the fourth one will amass greater riches than all others. And as soon as he has become strong in his riches, he will rouse up everything against the kingdom of Greece.”

The Trireme—A Lethal Vessel

The strength behind the naval domination of the Athenians in the Aegean in the fifth century B.C.E. was the trireme, a slender vessel that traveled under sail to its destination but was powered by oars during naval battles. Each galley carried a small band of soldiers. But their goal was not so much to board enemy ships as it was to disable them with the metal-tipped ram of the trireme propelled to its target by 170 rowers.

Succeeding Cyrus II, Cambyses II, and Darius I, ‘the fourth king’ was actually Xerxes I, evidently the Ahasuerus mentioned in the Bible book of Esther. Did he really “rouse up everything against the kingdom of Greece,” and what was the outcome of this?

Xerxes—A Determined Conqueror

Xerxes had to cope with the aftermath of the defeat of the forces of his father, Darius, at Marathon.* Thus, Xerxes spent the first years of his reign crushing revolts in the empire and also becoming “strong in his riches.”

However, the conquest of Greece, which his ambitious courtiers urged him to undertake, lingered in Xerxes’ mind. So starting in 484 B.C.E., he spent three years assembling, from all the satrapies and states under Persian control, what was reportedly one of the greatest armies that had ever marched on the face of the earth. According to the Greek historian Herodotus, the combined strength of Xerxes’ land and naval forces amounted to an incredible 2,317,610 warriors.[#]

* For further details, see “The Battle of Marathon—Humiliation of a World Power,” in the May 8, 1995, issue of *Awake!*

[#] As is true of so many ancient battles, the numbers of the Persian army are in dispute. Historian Will Durant cites a number close to Herodotus’ estimate, whereas other reference works opt for numbers that vary from 250,000 to 400,000 men.

Hellenic Maritime Museum/
Photo: P. Stolis



In the meantime, the Greeks began preparing in their own manner. Though a seafaring people, they were lacking in naval strength. But now, responding to the threat of the Persian onslaught and an oracle from Delphi that instructed them to defend themselves with "wooden walls," Athens began to build a fighting navy.

The state-owned mines of Laurium were the site of a rich strike of silver, and Themistocles, a prominent Athenian politician, persuaded the Assembly to use the whole surplus in order to build a fleet of 200 triremes. After some initial indecisiveness, Sparta led the formation of the Hellenic League, made up of some 30 Greek city-states.

Meanwhile, Xerxes was moving his aggressive destructive force to Europe—by no means an easy task. Food was to be provided by the cities along the road, at a cost of 400 talents of gold a day for the whole army to eat a single meal. Months before, heralds had been sent ahead to prepare grain, cattle, and poultry for the royal table. Only Xerxes enjoyed a tent; the remainder of the army slept in the open.

The vast army had first to cross the Hellespont (now called the Dardanelles), a narrow strait that separates Asia from Europe. After a pair of boat bridges collapsed during a storm, Xerxes—in a frenzy of rage—ordered the very waters of the Hellespont to be whipped with 300 lashes, branded with irons, and fettered. He also had the engineers beheaded. When a second pair of bridges was built over the Hellespont, it took a full week for the army to cross.



Thermopylae—A Costly, Narrow Strip of Land

About the middle of 480 B.C.E., the imperial Persian army, attended by the fleet, progressed down the coast of Thessaly. The Greek allied forces had finally decided to make their stand at Thermopylae, a narrow strip of land where at that time the mainland mountains dropped steeply to within 50 feet of the beach.*

The Persians would have to pass this strip in such a narrow column that a band of staunch soldiers might check them. An advance force of 7,000 Greeks under King Leonidas of Sparta took up their position at the straits near Thermopylae. Meanwhile, the Greek navy, 270 warships, lay off the coast at Artemisium, playing cat and mouse with the Persian fleet.

Xerxes reached Thermopylae in early August, confident that the vastness of his force would rout the Greeks. When the Greeks

* Alluvial deposits have altered the coastline, so that today it is a broad, swampy plain from one and a half to three miles wide.

held fast, he sent the Medes and the Cissians to clear them out; but these forces suffered heavy losses, and the Immortals (a crack fighting troop), whom Xerxes sent under the satrap Hydarnes, fared no better.

Ephialtes, a Nightmare

Just when it seemed that the Persians had been thwarted, Ephialtes (Greek for "nightmare"), an avaricious Thessalian farmer, offered to lead them over the hills, to the rear of the Greek force. The next morning the Persians were closing in to attack the Greeks from behind. The Spartans, realizing that they were doomed, defended themselves with fury; many of their assailants, driven under the lash, were trodden to death or forced into the sea. Eventually, King Leonidas and all those with him, about 1,000 men, were killed. Hydarnes gained the Spartan rear.

The Persian army along with the remnants of the Persian fleet hounded the Athenians home. Xerxes marched into Attica, pillaging and burning as he progressed. The Athenians evacuated to the nearby island of Salamis. The Greek fleet stayed between Athens and Salamis. It took two weeks for the acropolis of Athens to fall. The defenders were all killed, and the sanctuaries were smashed, burned, and plundered.

Salamis—The "Wooden Walls" at Work

Greek warships had already met the Persian fleet in several fierce but irresolute engagements near Thermopylae. Then, with the retreat on land, the Greek fleet had withdrawn to the south. It now reassembled in the bay of Salamis, where Themistocles began setting up a battle plan.

He knew that the 300 Phoenician warships that formed the nucleus of the Persian navy were larger yet more maneuverable than the smaller, sturdier Greek triremes. The Persian fleet numbered some 1,200 vessels, compared with 380 in the Greek force. And the Greek sailors were not as experienced as the sail-

ors on the Persian warships. But the channel between Salamis and the coast of Attica was narrow, only wide enough for the ships to advance 50 abreast. If the Greeks could lure the Persians into this natural funnel, the Persian advantage in numbers and maneuverability would be gone. Allegedly, Themistocles precipitated the contest by sending a deceptive message to Xerxes telling him to attack before the Greek fleet had an opportunity to flee.

And so it happened. The Persian fleet, each warship in full battle array with its banks of oarsmen and its fighting force of spearmen and archers, rounded the tip of Attica and sailed toward the channel. Xerxes, certain of victory, had set up his throne on a mountain where he could watch the battle in comfort.

Bitter Defeat

There was great confusion as the Persians crowded together in the narrow passage. Suddenly, a trumpet sounded from the heights of the island of Salamis, and the Greek vessels surged forward in orderly ranks. The triremes smashed into the Persian vessels, crushing their hulls and driving them into one another. Greek warriors leapt onto the battered enemy ships, wielding swords.

The sands of Attica's shores became littered with shattered timbers and broken bodies. In the aftermath of this catastrophe, Xerxes mustered his remaining ships and set out for home. His campaign was finished for the year. But he left a sizable army to winter there under the command of his brother-in-law Mardonius.

For diligent students of the Bible, the defeat at Salamis was an indication, long in advance, of the eventual supremacy of the Greek "he-goat" of Daniel's prophecy over the 'two-horned ram' of Medo-Persia. (Daniel 8:5-8) More important, Bible prophecy assures God's servants that the futile human struggle for domination will finally be ended by the rulership of the King Jesus Christ.—Isaiah 9:6; Daniel 2:44.

WATCHING THE WORLD

A "Movement of Mistrust"

"A crisis has opened up at the heart of the World Council of Churches," notes the French newspaper *Le Monde*. The council, which last August celebrated its 50th anniversary, was formed to help unite Christian denominations worldwide. In recent years, however, a "movement of mistrust" has developed that "threatens the participation" of Orthodox religions in the organization. One of the grievances cited by Orthodox churches was that some Eastern countries have become "victims of proselytism" by Catholic and Protestant missionaries. One church, the Orthodox Church of Georgia, has already pulled out of the 330-member council. Thus, the "departure of Orthodox Churches from the World Council in Geneva is no longer an absurd hypothesis," says the paper.

Never Too Late to Quit

A study spanning 40 years found that people who stop smoking, even at the age of 60, greatly reduce their risk of developing cancer, reports Britain's *Daily Telegraph*. Professor Julian Peto, of the Cancer Research Institute in Sutton, England, says: "It has not been until the last year that we could see the full horrors of what smoking does, killing half of smokers rather than a quarter as we thought, but also how very large the benefits of giving up [smoking] are, even

in old age." Children are regularly warned about the dangers of smoking. However, older people need to know that quitting tobacco can greatly reduce their risk of developing lung cancer, Peto indicates.

Marriage Can Bring Happiness



Some denounce marriage as oppressive, and TV sitcoms often portray it as hopelessly old-fashioned. But what do the facts show? Are unmarried people necessarily better off? Not according to one sociologist quoted in the *Philadelphia Inquirer*. She says that married people are "generally happier, healthier and wealthier." As a group, those who marry also experience less stress, are less likely to commit crimes or use illicit drugs, and are more likely to get off welfare. Not surprisingly, experts say that married people live longer too.

Tainted Blood?

Nine daily newspapers in the New York City area recently carried an advertisement under the headline "To All Who Received Blood From January 1991 to December 1996 in a New York/New Jersey Hospital." Although the sponsor of the ad, the New York

Blood Center, says that the intent of the ad was to assure anyone who had received a blood transfusion during the early 1990's that the blood supply was safe, it may have had the opposite effect. Why? No doubt one cause for concern was the ad's warning: "Recipients of donated blood products during that period may face a potential risk of transfusion-transmitted infections, such as HIV and hepatitis."

Cancer Often Misdiagnosed

"Official statistics on cause of death may underestimate the toll from cancer," reports *New Scientist* magazine. Dr. Elizabeth Burton, of the Medical Center of Louisiana at New Orleans, examined the records of 1,105 patients on whom autopsies had been performed between 1986 and 1995, to compare the rate of clinical diagnoses of cancer with the autopsy diagnoses. According to Burton, in 44 percent of the patients, the cancer had not been diagnosed or the type of cancer had been misdiagnosed. With current autopsy rates at 10 percent—compared with about 50 percent in the 1960's—"many mistakes may never be spotted," says the magazine.

Persistent Parasite

Taenia solium, a parasite that causes the sickness cysticercosis in humans, is still a problem in some underdeveloped countries. The sickness usually results from eating infected pork that is undercooked

or food contaminated with the larvae of the parasite. According to *Excelsior* newspaper of Mexico City, the parasite is "hard to detect," hence it "can develop in the human body for years without the bearer being aware of it." Symptoms can include fevers, headache, seizures, and vision problems. The paper says that to eliminate the parasite, researchers at the National Autonomous University of Mexico are working on developing a vaccine for pigs.

Warning Signs of Stroke

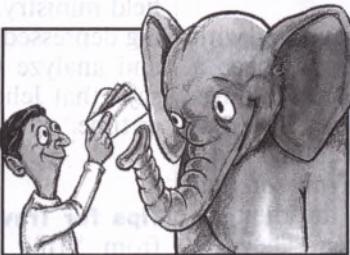
"Many people can't identify even one symptom of stroke," reports the *FDA Consumer*. The magazine adds: "Only slightly more than half of those surveyed could name at least one stroke symptom, and only 68 percent could name one stroke risk factor." This is in spite of the fact that stroke is a leading cause of death and the main cause of disability in the Western industrialized world. To help minimize the damage caused by stroke, it is important that you seek immediate medical help at the first warning sign. The most common symptoms of stroke are sudden weakness, numbness, or paralysis of face, arm, or leg; sudden blurred vision or loss of vision, particularly in one eye; difficulty in speaking or in understanding speech; and unexplained dizziness or loss of balance, especially when combined with other warning signs.

Burning Chain Letters

Since 1992 an annual Buddhist letter-burning ceremony has been held in the city of Na-

goya, Japan, to dispose of chain letters. Postal authorities installed collection boxes for the unwanted letters in post offices throughout the city and asked a Buddhist temple to hold a ceremony to burn them. *Asahi Evening News* explained that this service has been provided "for the more superstitious recipients who were afraid to ignore or destroy the letter themselves." Why were they afraid? The letters do not simply promise benefits to those who follow instructions. They also threaten misfortune to anyone breaking the chain. For instance, one letter warned that a person who broke the chain in Tokyo had been murdered.

Elephant Rights



In many parts of India, elephants form an important part of the work force. *The Week* magazine reports that in the north Indian state of Uttar Pradesh, elephants are listed on government payrolls as full-fledged employees. Starting work at about 10 years of age, an elephant may serve its employers for up to 50 years. Upon retirement, an elephant receives a pension like other government employees, and a mahout, an elephant trainer and handler, is assigned to see that the elephant receives proper care and feeding. Ben-

fits during the working life of female elephants include a one-year maternity leave in the comfort of a zoo before returning to the important work of timber-hauling, corralling and training wild elephants, and patrolling national parks and protected forest areas.

Toward a Universal Language?

"In a central Asian country where Western tongues are rarely spoken," an eight-year-old tells his father that he has to learn English. The father asks why. "Because, father, the computer speaks English." That story, notes *Asiaweek*, "illustrates what many consider to be an insidious side-effect of the information superhighway . . . , the potential to hasten an already rapid shift toward a dominant global language—English." The magazine adds: "This does not spring from any pull toward universal brotherhood. It is merely practical. If we are going to engage in digital discourse and commerce across the Internet, a common currency is required for easy exchange." Why English? Because "the PC business was born in the U.S., as was the Internet. Some 80% of the online content today is Anglophone." Use of other languages is slowed in some cases because of the difficulty of adapting them to the English-based keyboard. "There will be a price to pay," says *Asiaweek*. "Linguists predict that half of some 6,000 languages spoken today will fall into disuse by the end of the next century, possibly within the next 20 years."

FROM OUR READERS

Bringing Phobias Under Control While I was reading the articles on phobias (July 22, 1998), I felt as if a comforting arm were being put around me. At last, someone understood the living nightmare my wife has endured all her life. Social phobia has caused her untold misery. I never fully understood what she was going through. Her sheer terror of public speaking, using the telephone, interacting with others, as well as her blackouts and panic attacks—all these symptoms were described in your articles. It was as if all the pieces of a jigsaw puzzle suddenly fell into place. Many people have badly misinterpreted the panic and terror my wife suffers and have seen it as rudeness or anti-social behavior. It is my hope that such ones will read these very fine articles.

M. C., Scotland

My son, who is only ten, was diagnosed with agoraphobia earlier this year. It has been a very difficult struggle. There were two things that I really loved about the articles. The first was the section "Men 'With Feelings Like Ours.'" This really drove home to my son that he isn't alone. The second was the thoughtful way the articles were written. They did not condemn or belittle, but they were written with love, kindness, wisdom, and then more love.

K. J., Australia

I thought these articles were good because they focused attention on what a person can do. You explained the basic steps that make the control of phobias possible. This helped me to feel that I can get the help I need and make progress.

J. I., Japan

This was the first time I have really felt understood. I cannot describe how good it is to know that Jehovah understands the suffering that a social phobia can cause. The articles

also helped my friends to understand more clearly what I go through.

G. O., Germany

I was amazed by the empathy you show for those who, like me, suffer from social phobias. These articles were just what was needed. What courage it gave me to know that others have the same problem! I am ready to roll up my sleeves and beat this phobia.

S. D., Italy

Why Can't I Concentrate? I wept with joy when I read the article "Young People Ask . . . Why Can't I Concentrate?" (July 22, 1998) I am 18 years old and serve in the full-time ministry. I was concerned because I could not concentrate, and this is important in order to be able to help people in the field ministry. I had got to the point of feeling depressed because I could not remember and analyze things. It is true, as the Bible says, that Jehovah provides food at the proper time.

A. R. C. R., United States

Tips for Travelers One tip that is missing from "Tips for Travelers," in the article "Dengue—A Fever From a Bite" (July 22, 1998), is to use a mosquito net at night, preferably one that has been treated with an insecticide.

I. H., England

We appreciate the reader's comments. For malaria prevention, this tip is especially useful. (See "Awake!" of July 22, 1997, page 31.) However, according to the U.S. Centers for Disease Control, the mosquito that causes dengue fever "prefers to feed on humans during the daytime." It bites most frequently "in the morning for several hours after daybreak and in the late afternoon for several hours before dark." Hence, using mosquito netting at night may not be very effective in preventing this particular illness.—ED.

Show That You Care

By *Awake!* correspondent in Canada

Private anguish among many seniors in Canada is driving them to suicide at an alarming rate. A report in the *Vancouver Sun* newspaper notes that while 1 out of 200 suicide attempts by young people ends in death, the ratio is 1 out of 4 for those over 65. And it is believed that there is even an “under-reporting of suicide among the elderly, because it can be difficult to distinguish from natural causes in seniors with serious health problems.”

Why is it that many of the elderly lose the will to live? University of British Columbia psychiatrist Oluwafemi Agbayewa, an expert on the issue of suicide among seniors, points to depression, social isolation, and loneliness as contributing factors. Gerry Harrington, the director of the Suicide Information and Education Centre in Calgary, Alberta, notes that as people age, they “lose their respect, their power, their control. . . . All of a sudden, no one asks for their opinions anymore. Too many people end up in nursing homes with nothing to do but sit and play cards and watch TV.” Compounding this feeling is the fact that society places a high value on youth as well as on independence, productivity, and speed—the very traits that diminish as one ages.

In the eyes of Jehovah God, however, the elderly are highly valued. Evidence that he keenly understands their emotional needs can be seen in his command to the people of ancient Israel: “Before gray hair you should rise up, and you must show consideration for the person of an old man, and you must be in fear of your God.”—Leviticus 19:32.

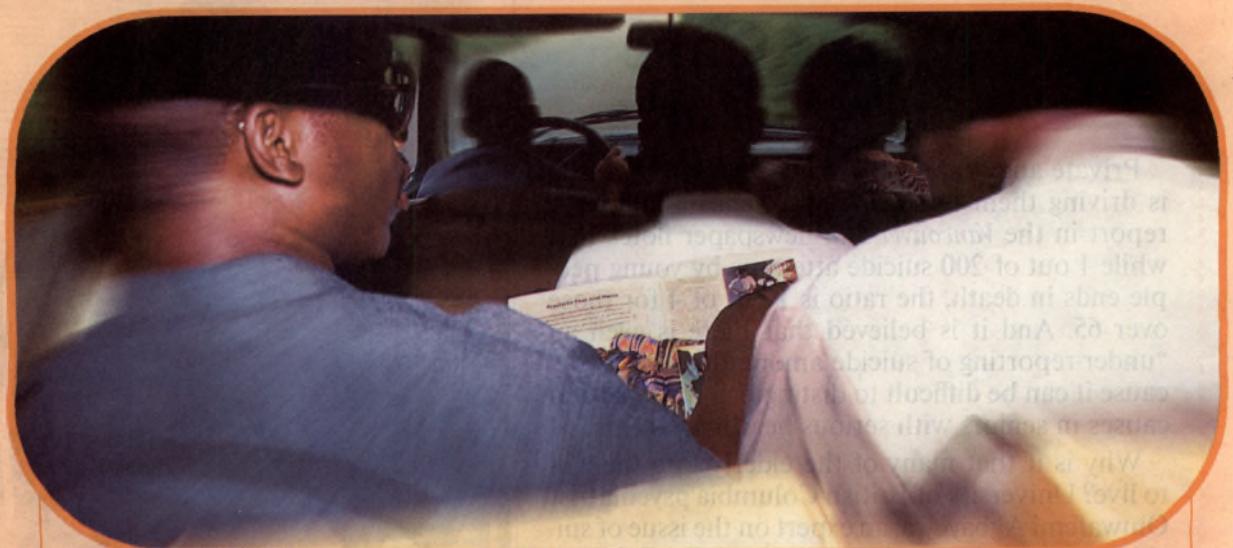
So, then, how can we “show consideration” for the elderly? Although words of wisdom may not constantly flow from their lips and their imperfections may be magnified by old age, they merit our respect. Show that you care. Accord them dignity, honor, and recognition by drawing on



their insight and wisdom, especially when their life has been guided by God’s spirit and an accurate understanding of his Word.

There is much more that God’s Word teaches on the subject of caring for and honoring the elderly. For more information, please write to the publishers of this journal and ask for the book *The Secret of Family Happiness*.

It Saved the Man's Money



While traveling by taxi between cities in Nigeria, West Africa, a man discussed with a fellow traveler "Practices That God Hates," a lesson found in the brochure *What Does God Require of Us?* When the taxi stopped at a restaurant, the man who had taken a keen interest in the brochure pointed to a package he was carrying and explained: "It is money. . . . I took it from one of the traveling bags in the back of the taxi."

However, the man who had taken the money was now sorry for what he had done and wanted to return the money to its owner. The package was identified by a young merchant, a fellow traveler, as being his. It contained 150,000 naira (about \$1,700). The thief, who had been trailing his victim for 300 miles, told the merchant that he should thank the one who had considered with him the information found in the brochure. It was that information, he explained, that caused him to return the money.

When the driver and the other passengers learned what had occurred, they were

amazed, and they all wanted copies of the brochure. The merchant had never previously allowed the Witnesses to speak to him, but now he wanted a Bible study.