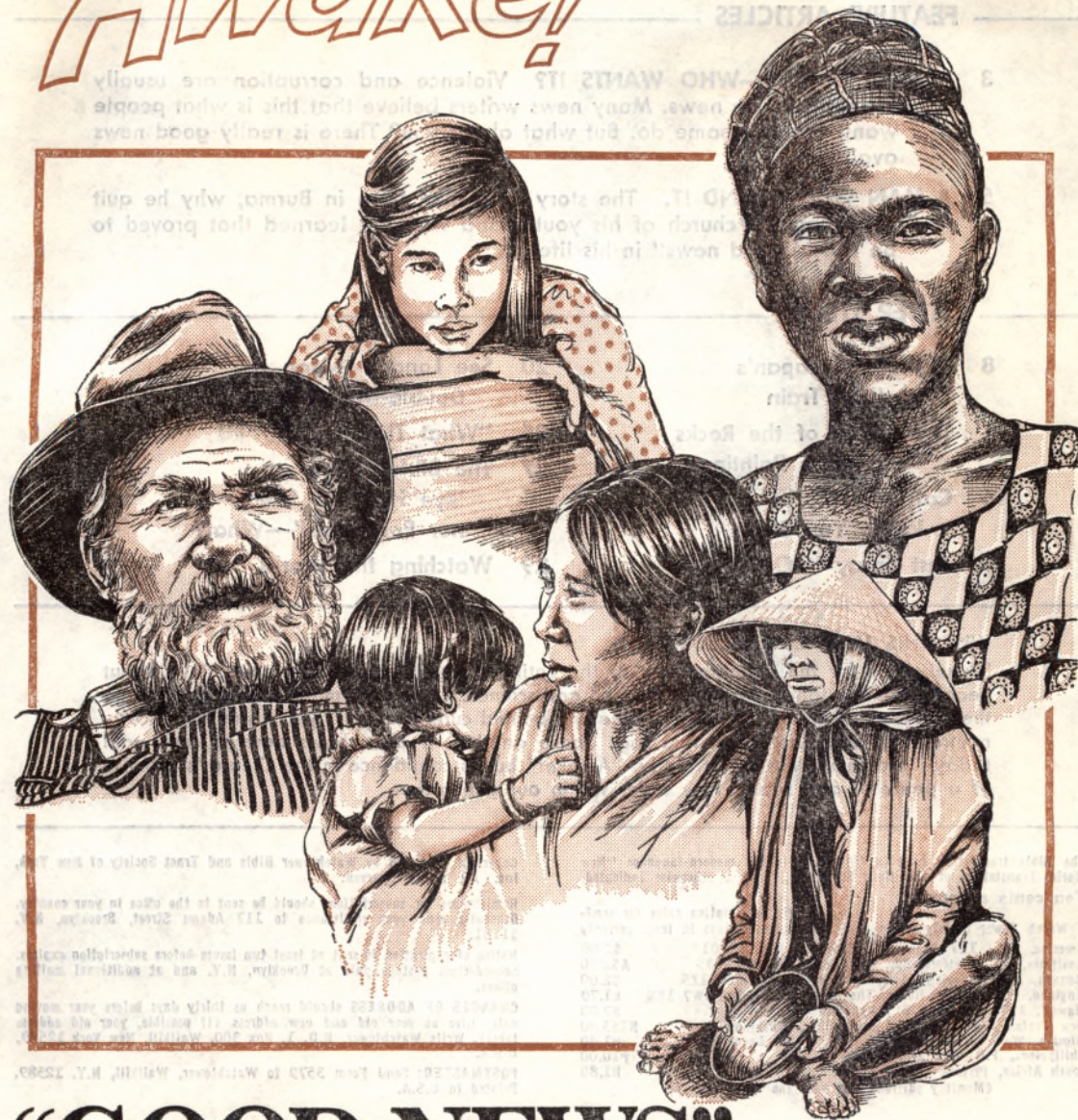


Awake!

JULY 8, 1978



“GOOD NEWS”

—Who Wants It?

—A Man Who Found It

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WHY THIS MAGAZINE IS PUBLISHED

"Awake!" is for the enlightenment of the entire family. 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 stays politically neutral and does not exalt one race above another. It also shows how to cope with today's problems. Most importantly, "Awake!" builds confidence in the Creator's promise of a peaceful and secure new order within our generation.

The Bible translation used in "Awake!" is the modern-language "New World Translation of the Holy Scriptures," unless otherwise indicated.

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“GOOD NEWS” —Who Wants It?

“GOOD news doesn’t sell!” “The public wants violence and sensationalism.” These have been cited as “stock replies” given to those who advocate the balancing of “good news” with “journalism that constantly suggests we are on the brink of Armageddon.”—*Popular Photography*, January 1978.

True, some people seem to desire “bad news” rather than “good news.” But are there not many who would welcome “good news”?

What About the Elderly?

Would not the world’s senior citizens appreciate good news? Are they happy to hear that misfortune has befallen some el-

derly person? As a case in point, please consider the following incident:

Returning home one afternoon, an 85-year-old woman was unlocking the door of her apartment when three teen-agers rushed up and forced her inside. They tied up the woman, beat her and took

\$275 (U.S.). However, before departing, they put a pillowcase over the aged woman’s head and turned on every gas jet in the apartment. Surely that would have meant her death. But in some way the woman freed herself and called for aid.

Certainly that aged woman—and many like her—would be delighted to receive the good news that such assaults are to end for all time. Well, in the Scriptures, Jehovah God has given this assurance: “The future of wicked people will indeed be cut off. And the salvation of the righteous ones is from Jehovah . . . He will provide them with escape from wicked people and save them, because they have taken refuge in him.”—Ps. 37:38-40.

Consider the Poor and Hungry

Poverty-stricken millions on earth would be glad to receive the good news that they will have adequate housing and plenty of good food. When the United Nations Food and Agriculture Organization opened a conference of 136 countries in November 1977, it presented the bad news that 500 million people world wide are victims of the "double scourge"—hunger and malnutrition.

Would not the hungry poor be comforted if they heard and accepted the good news that God's heavenly kingdom will eliminate poverty and hunger? What the inspired psalmist said regarding ancient Israel's wise king Solomon will soon come about under the rule of Jesus Christ, who is greater than Solomon: "He will feel sorry for the lowly one and the poor one, and the souls of the poor ones he will save. There will come to be plenty of grain on the earth; on the top of the mountains there will be an overflow."—Ps. 72:13, 16; Matt. 12:42.

The Ailing Also Need Good News

Disease stalks the earth, and both the afflicted and their family members are well aware of the suffering that it brings. Unquestionably, they are not eager to hear about deaths from cancer, heart disease or other maladies. They would be delighted to receive reliable good news to the effect that disease will be eliminated earth wide.

Jehovah God soon will do this very thing. In fact, he already has demonstrated his ability to remove diseases. God was able to offer his ancient people protection from illness, if only they would obey him. Through the prophet Moses, the Most High declared: "You must serve Jehovah your God, and he will certainly bless your bread and your water; and I shall indeed turn malady away from your midst." (Ex. 23:25) The Bible penman Isaiah wrote of a

time when "no resident will say: 'I am sick.'" He told about spiritual healing of the blind, deaf, lame and speechless, such prophecies also indicating that physical cure would occur in the future. (Isa. 33:24; 35:5, 6) Moreover, when on earth, Jesus Christ healed people spiritually and physically, thus giving evidence that under Kingdom rule obedient mankind will enjoy permanent release from illness, sin and death traceable to the first man, Adam.—Matt. 8:14-17; Rom. 5:12; Rev. 21:1-5.

Meaning for Today

Who, then, does not want good news? Is it not heartening to learn that under the rule of God's heavenly kingdom there will be no more crime to threaten the elderly or others? Are not thinking persons overjoyed to hear that the King Jesus Christ will care for the poor and supply their needs, including wholesome food? And who would not be delighted to live when disease and death are no more?

Bible prophecies indicate that such good news soon will become an earth-wide reality. But how does that knowledge help those *now* suffering? Why, just the assured hope of seeing these blessed conditions is something that buoys up the weary sufferer!

Repeatedly, Jehovah has demonstrated that he is "the God who gives hope," not a vain hope but an assured one. (Rom. 15:13) For instance, please consider the situation prevailing among God's people of ancient times. If, due to some financial troubles, a man had to sell a hereditary possession—a tract of land—he and his family were not left without hope of its restoration. Such property would be restored to the family during the Jubilee year, which occurred once every 50 years. (Lev. 25:8-10, 13, 23, 24) So, Jehovah proved to be a hope-giving God, and when

the Jubilee law was applied, a family always had a ray of hope.

The same God is holding out hope today. Furthermore, his inspired Word, the Bible, teaches people how to live *now* so that they may be able to improve their circumstances in life. Interestingly, World-watch Institute and the United Nations Environment Program recently sponsored a worldwide study of environment's impact on human health. In a report thereon written by Erik P. Eckholm, it was said that "the true obstacles to better health . . . are political failures," that is, the nations' failing to organize matters in order to minimize environmental threats to health. According to the *Detroit Free Press*, also involved are "failures of individuals to avoid self-destructive life-styles." The environmental report said that in affluent lands "major health gains will necessarily involve habit breaking," the discontinuing of such practices as smoking, overeating and heavy drinking.

But those who respond appreciatively to the "good news of the happy God," Jehovah, already are benefiting from the counsel of his Word. (1 Tim. 1:11) They follow the admonition: "Do not come to be among heavy drinkers of wine, among those who are gluttonous eaters of flesh. For a drunkard and a glutton will come to poverty, and drowsiness will clothe one with mere rags." (Prov. 23:20, 21) Also, those heeding the "good news" act to preserve the measure of health they have by shunning such detrimental habits as smoking.—2 Cor. 7:1.

So, then, who wants good news? Not everyone, to be sure. But if *you* desire good news, instead of the bad news so widespread today, take advantage of your opportunities to listen to the Bible's message. It is brought to your home by the Christian witnesses of Jehovah, "the God who gives hope" and the One having the best of news for you.

—A Man Who Found It—

As told to "Awake!" correspondent in Burma

I WAS born into a family of very devout Roman Catholics. In fact, two of my uncles joined the teaching order of the Roman Catholic Brothers. I was baptized at the age of three weeks. Roman Catholics believe that if a child dies before it can be baptized, it will go to a place called "Limbo," which is neither Heaven nor Hell.

When I was attending St. Paul's High School, in Rangoon, Burma, I had Catholicism drummed into my head by the Ro-

man Catholic Brothers, who taught us that the Catholic religion was the only true one. As an impressionable youngster, I felt very proud to be a Catholic. On the other hand, I felt quite sorry for some of my classmates who were, I thought, not fortunate enough to be Catholics. It was an honor, we were often told, to be associated with the only true religion. The religious pomp and ceremony that went on in church appealed to me.

But this attitude did not last. On enter-

ing my mid-twenties I gradually became disenchanted with the Roman Catholic way of worship. Eventually the Mass, which at one time had impressed me so much, became empty ritual and quite meaningless. Every Sunday the priest performed the same ceremony without teaching the congregation anything new spiritually. Though still feeling a need for religion in my life, I stopped going to church.

During my twenties I became what might be described as an 'on again, off again' Catholic. At the age of 30, I met my future wife. Four years later, at a Nuptial Mass with organ music and choir singing, a really beautiful ceremony, we got married. Though my wife came from a Buddhist family, she became a convert to Catholicism a week before we got married. This had required her to visit the parish priest each weekend for quite some time before our marriage in order to receive religious instruction. Considerable travel was involved, for she lived eight miles (13 kilometers) out of the city.

After getting married, it seemed good that I take the lead in religious activities. I began attending church regularly, took an interest in church activities, became a church elder and even began publicly reading the Epistle at Sunday Mass, which was by then being conducted in English. Gradually this burst of religious zeal waned, and again I quit attending church.

A Wonderful Awakening

In 1976 something wonderful happened to me. I came to know that God had a personal name, JEHOVAH. As a Catholic I didn't know that God had a name. This was the beginning of a fine education that my wife and I gained when a married couple who are Jehovah's Witnesses conducted a Bible study with us. It impressed me that each week they would travel six miles (10 kilometers) to

our home under difficult conditions. You would have to experience a ride in one of Rangoon's buses to know what I mean. A bus that holds 40 persons comfortably is forced to carry over 100 passengers pressed together like sardines. I can't imagine a priest doing the same thing to teach someone the Catholic religion.

As I progressed, taking in Bible knowledge, it became clear that many of my Catholic beliefs did not harmonize with the Word of God. Evidently my religion was not pleasing God. Let me explain.

Religious Pictures and Images

Look inside any Catholic church and you will find religious pictures and images that are given prominence and honor. You will also find the same things in Catholic homes. Pictures, images, medals and even "relics" of "saints" are objects of reverence by Catholics.

From our Bible study, we learned that image worship does not please God. For example, the Scriptures warn against it at Isaiah 42:8, which says: "I am Jehovah. That is my name; and to no one else shall I give my own glory, neither my praise to graven images." Indicating his attitude toward images, God declared in the second of the Ten Commandments: "You must not make for yourself a carved image or a form like anything that is in the heavens above or that is on the earth underneath or that is in the waters under the earth. You must not bow down to them nor be induced to serve them, because I Jehovah your God am a God exacting exclusive devotion." (Ex. 20:4, 5) Yet, in the Catholic religion candles are burned in front of statues, and flowers and money are offered to them, while worshipers bow or kneel in prayer before them. I used to do the same thing.

Catholics believe that image worship can cause the "saints" to act as mediators between God and the worshiper. However,

the Bible indicates that this is wrong, for we read: "There is one God, and one mediator between God and men, a man, Christ Jesus." (1 Tim. 2:5) Besides Jesus Christ, none can mediate with God on our behalf. (Compare John 14:6; Acts 4:12.) It amazed us to learn that we had been giving more honor to created persons and things than to the Creator.—Rom. 1:25.

An example of praying to persons other than God is the *Confiteor* (meaning "I Confess"), a prayer used during Mass. It includes the following: "I confess to Almighty God, to blessed Mary ever Virgin, to blessed Michael the Archangel, to blessed John the Baptist, to the holy Apostles Peter and Paul, and to all the saints, that I have sinned exceedingly in thought, word, and deed." According to the Bible, though, it is God alone who is the "Hearer of prayer." (Ps. 65:2) Jesus taught that prayers should be directed to "Our Father in the heavens."—Matt. 6:9.

That raised a question in our minds about the rosary, which involves repeating particular prayers many times, especially a prayer to Mary called the "Hail Mary." In view of what we had been learning from the Bible, it dawned on us that prayers to Mary and "saints" could not be pleasing to God.

Moreover, Jesus himself showed that God does not favor repetitious prayers, when he said: "But when praying, do not say the same things over and over again, just as the people of the nations do." (Matt. 6:7) What does the rosary involve, if not saying the same thing over and over again? As for calling Mary "ever Virgin," did you know that she gave birth to several children after Jesus? We read at Matthew 13:55, 56: "Is this not the carpenter's son? Is not his mother called Mary, and his brothers James and Joseph and Simon and Judas? And his sisters, are they not all with us?" To us this was quite a revelation.

Immortality of the Soul

As a Catholic I was taught that *my soul* is immortal, that when I die my body will return to dust but my soul will leave the body. Church teaching has it that, according to my conduct while alive on earth, the soul will go either to Heaven, to a fiery Hell or to a torturous place of temporary punishment called Purgatory.

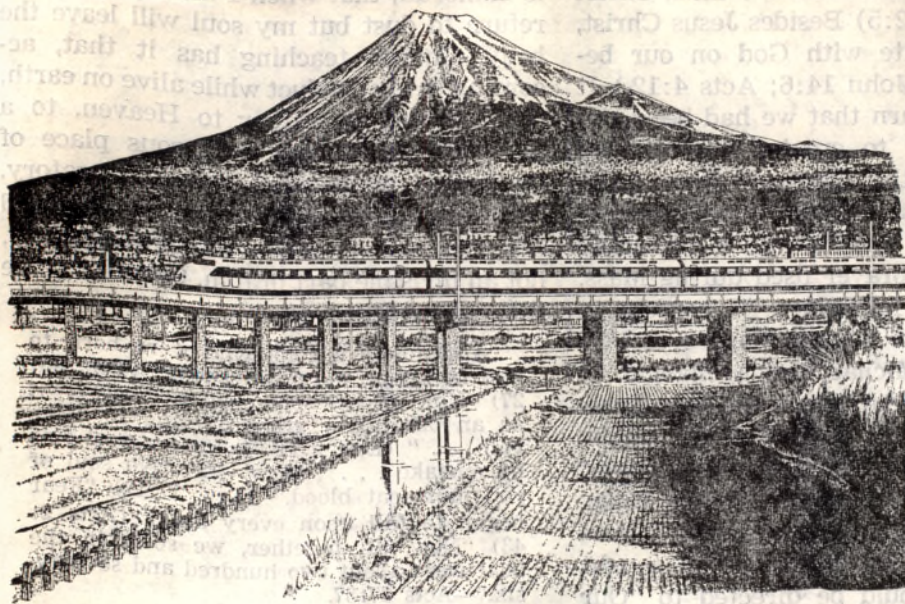
Through Bible study, however, I learned that the human soul is the entire person, not an invisible part of him. Consider some Biblical evidence of this:

"And Joseph's sons who were born to him in Egypt were two souls." (Gen. 46:27) "Now in case some soul would present as an offering a grain offering to Jehovah . . ." (Lev. 2:1) "In case a soul sins by mistake . . ." (Lev. 4:2) "No soul of you must eat blood." (Lev. 17:12) "Fear began to fall upon every soul." (Acts 2:43) "Now, all together, we souls in the boat were about two hundred and seventy-six."—Acts 27:37.

Of course, if the soul is the person himself, when an individual dies, the soul dies. That is why the Bible repeatedly mentions souls dying or being destroyed. For instance, it states: "I must destroy that soul from among his people." (Lev. 23:30) Jesus asked: "Is it lawful on the sabbath . . . to save or to destroy a soul?" (Luke 6:9) As for the condition of the dead, the Scriptures pointedly state: "As for the dead, *they are conscious of nothing at all.*"—Eccl. 9:5.

In the short space of one year, I learned more about God and the Bible than during all of my 46 years as a Catholic. What I learned was truly "good news." Bible study has certainly made me appreciate Jesus' words: "You will know the truth, and the truth will set you free." (John 8:32) My wife, my eldest son and I symbolized our dedication to God by water baptism during the "Joyful Workers" District Assembly of Jehovah's Witnesses in 1977. How happy we are at last to have found the way of worship that truly pleases God!

A ride on Japan's "Bullet" train



By "Awake!" correspondent in Japan

ARRIVING at Tokyo station, we jostle our way through the crowds until we reach the platform. This is especially designed for the *Shinkansen* or New Trunk Line train, known to foreigners as the "bullet." We want to visit Kyoto today; so we will board the "Hikari" *Shinkansen* train, the super "light" express. In a short time, our crowded train arrives, a 400-meter- (about one-fourth-mile-) long white streak set off with a blue underbody—really streamlined-looking. Its rounded front has the look of a button nose, with headlights on either side, like two staring eyes.

In just a few short minutes, the train is completely empty, having discharged a load of as many as 1,400 people. In a few more minutes, cleaning girls have picked up the small amount of litter left by the passengers, and it is announced that we can board.

We had bought our reserved seats the day before at our suburban railway sta-

tion. This had taken only a minute or so. Reservations for the entire Japanese express train system are computerized, so that, when you advise the ticket clerk of your desired train, the computer either prints out your ticket for that train or, if no seats are available, provides information about the next best reservation for you.

And if you say that it is suitable, it immediately prepares that ticket. Also, several of the 16 cars have "free seating," so that you can line up for these seats if you do not have a reservation.

We are happy that we have seats on the right side of the train, for we will get a good view of Mount Fuji. This train goes so close to the mountain that you feel as if you could reach out and touch it. Notice the nice seats—three on one side and two on the other, with blue upholstery and fresh white cloths for your head. In the two special "green cars," there are even luxury reclining seats.

While we wait for the train to start, let me tell you something about it. The *Shinkansen* opened in 1964 with a short line of about 515 kilometers (320 miles) from Tokyo to Osaka. Then, in 1972, the line was extended down to Okayama and in 1975 on to Kyushu, making a total of 1,176 kilometers (731 miles).

This streamlined train can reach 286 kilometers (178 miles) per hour. But for a regular run, like ours today, we will travel 210 kilometers (130 miles) per hour—still very fast. Conventional trains used to take six hours and 50 minutes for the Tokyo to Osaka trip, but at this speed it takes only three hours. You can understand, then, why this train is nicknamed the “bullet.”

A Smooth Ride

Here we go—starting out quite slowly, and gradually gaining speed. No need to hang on to anything, as there are no jerks or bumps. The “bullet” rides so much smoother than a car or a bus that you don’t realize the high speed until you look out the window and see scenery whizzing by. Even at this speed, walking in the aisles is not hard. Clearly, much thought and engineering have gone into making the “bullet” train both fast and comfortable.

Where is the clickety-clack sound usually caused by the rail joints? Well, for one thing, regular steel rails are only 25 meters (82 feet) long, but rails for the bullet are 1,500 meters (nearly a mile) long without any joints. Additionally, where the rails meet, there is a flexible joint that is designed to eliminate shock and cope with expansion and contraction.

In order to lessen outside train noise, concrete crossties and gravel form the railbeds in populated areas. But in rural areas

(most of the line) a concrete slab bed is used. The rails are installed directly onto concrete bed sections, each just under five meters (16 feet) long. Interestingly, this slab bed is “floating” on a “cushion.” How so?

Well, first, the concrete bed sections are placed on the underlying concrete foundation. Then asphalt mortar is injected at high pressure through small holes from the top until the bed section rises 50 millimeters (2 inches) off the foundation. This asphalt mortar becomes a “cushion” and

can absorb quite a bit of shock and noise from the “floating” bed.

Even with this type of railbed, noise from the train is one of the biggest problems for nearby residents. Many claim that they are suffering from

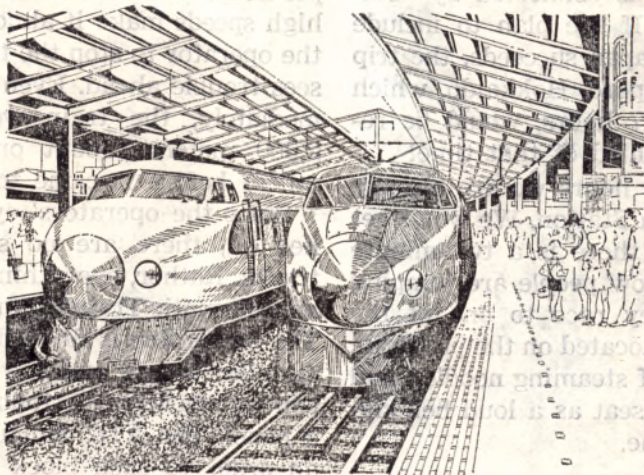
“noise pollu-

tion.” They are fighting the “bullet” train, asking, “Why is it necessary to travel at such high speeds anyway?”

Thirsty? I am, too. Here come two cute uniformed girls wheeling a cart. We can buy anything from coffee to beer—and let’s get some dried squid to munch on while we analyze this train a little more.

Curves and Tunnels

Do you see the front end of the train as we round this curve? For safety reasons, the entire line is built as straight as possible in high-speed areas. The sharpest curve is over six times as broad as that on regular train lines. The “bullet” can pass any point without shock at its speed of 210



kilometers (130 miles) per hour. Also increasing the train's stability is the wide span between rails—about 1.4 meters (4.6 feet). This is one and a third times as wide as the regular span of a little over one meter (3.3 feet).

Notice the farmers working in their rice fields? Oh, did you miss seeing them? Yes, there are many tunnels on the *Shinkansen* line, and our view is often blocked temporarily. An undersea tunnel presently connects the train with Kyushu, the southern island, and future plans are to have all four main islands connected by "bullet" train tunnels. If the plan to include all the islands of Japan succeeds, the trip from Tokyo to Sapporo, Hokkaido, which now takes about 17 hours, would be reduced to about a third of that time!

Here in just two hours we are already pulling into Nagoya Station. We won't get off here, although there is a two-minute wait. Do you see how people are jumping off the train? They race to one of the small noodle shops located on the platform, gulp down a bowl of steaming noodles, and race back to their seat as a loud bell signals departure time.

Need for the "Bullet"

A lot of people, including those living next to the tracks, ask why such a high-speed train is needed in a country made up only of islands. "Bullet" advocates answer that the land area in Japan is stretched north and south, with the main industrial cities located along the Pacific coastline. In the past, improving the highways along the coast sufficed. But these soon reached their limit, with no more room for wide new roads and/or more cars.

A different means of commuting between Tokyo and Osaka, the second-largest city in Japan, became necessary. Hence, the "bullet" train was born. It is often said that Japan could not have had such

rapid economic growth without the *Shinkansen*. Since it opened in 1964, it has carried over one billion passengers! As many as 350,000 persons ride about 260 trains daily.

A Safe Trip

Here come some more girls, this time selling ice cream. We'll wait to eat some later, and, instead, go up to the buffet car where we can see a speedometer set up for the passengers. It indicates that we really *are* going 210 kilometers (130 miles) per hour. It is hard to believe, isn't it? Such high speeds make it almost impossible for the operator to stop the train in time if he sees trouble ahead. Even if he braked immediately, the train would go another 2,000 meters (about one and a fourth miles) before it came to a halt!

Since the operators' eyes cannot be relied on, there are no signals along the tracks. Rather, everything is controlled by an Automatic Train Control system (ATC). The entire line is divided into 3,000-meter (2-mile) blocks and the controller at the control station can follow each train on a panel. The ATC computer system sends an order to each block controlling speed on that particular block. Five different speed orders issue from the control center: 210, 160, 70 and 30 kilometers per hour, as well as stop.

When our block is receiving a 210-kilometer-per-hour order from the ATC system, the block behind us would be sending out a 30-kilometer-per-hour order, the block behind that a 70-kilometer-per-hour order, and so forth, in order to avoid rear-end collisions. And this also means that when we are traveling at 210 kilometers per hour, there are no trains at least 9,000 meters (6 miles) ahead of us.

What about a malfunction in the ATC system? These are practically nil, though once a "bug" got into the system and recorded a stationary train as traveling at full

speed. All ATC systems have a backup and all electrical machines have a double backup, so that if one breaks down, another will take over. Even earthquakes are taken into consideration. Trains automatically stop when an earthquake registers a certain level on the seismograph scale.

To cope with rain, wind, snow, and so forth, there is a need to keep in constant touch with train operators and personnel at each station. A Centralized Traffic Control, or CTC system, at Tokyo's main control office handles this aspect of safety. There you can see a panel that shows all the traffic on the entire line from Tokyo to Kyushu. Operators in the control room keep close watch on the panel and direct necessary information to the individual trains.

Recently, due to the increase of trains and traffic, the National Railway has employed an additional computer system called "Comtrac," to complement these controllers. The Comtrac system has in its "mem-

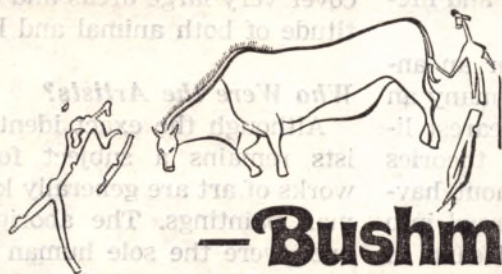
ory" such information as track numbers, timetables and conditions at each station.

If the train schedule is thrown off for any reason, the Comtrac system will notify the operators in the control room and will automatically make a new program of trains, including restarting time and, if necessary, cancellation of trains. It can govern all the necessary places throughout the ATC system, including announcements at certain stations—a truly amazing machine!

All these precautions have given the high-speed "bullet" a very fine safety record. Since October 1, 1964, the "bullet" train has not had an accident resulting in loss of life! Always safety is put first.

Well, here we are at Kyoto Station already. Just two hours and 50 minutes! Now you can say that you have had a "ride" on Japan's "bullet," the train world renowned for its high speed, and the envy of many countries.

The Riddle of the Rocks



—Bushman Paintings

By "Awake!" correspondent
in South Africa

FOR an art lover, a visit to an art gallery is usually an occasion of interest and delight. But even in large cities art galleries are few and far between. Southern Africa, however, can boast of literally hundreds of ancient art galleries. They have captivated interest and brought de-

light to countless artists, archaeologists and sightseers.

We are referring to the Bushman rock paintings. When the visitors gaze in fascination at a rock face covered with these pictures of people and animals, they ask themselves: Was the artist just doodling,

or was he trying to convey a message? And, beside a gurgling stream hundreds of miles from the sea, why and how did an artist make a nearly perfect drawing of a dolphin?

Looking for the Answers

Seeking answers to such questions and "motivated by the inevitability of the disappearance of these pictures," teams of archaeologists and artists such as the Frobenius expedition with artists from Germany, and Harald Pager from Austria, have worked against time to copy and record as many of the drawings as possible. The French archaeologist Abbé Henri Breuil was among the world-renowned researchers who, after having investigated European primitive art, particularly that of Spain and France, turned attention to the work of the Bushman artists of Africa. The investigators found the African field to be as full of unanswered questions as any area they had previously investigated. Finding solutions to the many problems became so absorbing that, in some instances, the researchers never returned home. Deciphering the riddle of the rocks became their dominating interest and life-work.

On the other hand, looking for an answer to these questions has sent many an armchair archaeologist to the nearest library. Here we can review the theories and findings of the experts without having to scramble up mountains, crawl into caves or trek through bush and sand in search of ancient works of art.

Man's Desire for Self-Expression

Rock art has been described as the lingua franca of the so-called "Stone Age"—the vehicle by which thoughts, ideas, even religious beliefs, were conveyed in the supposed absence of the written word. Almost every country has its archaeological sites that testify to man's innate de-

sire from earliest times to express himself artistically, or to make some sort of record of his life and daily activities. These ancient records range from the sophisticated inscriptions that appear in Egyptian tombs to the more primitive rock paintings found in caves throughout parts of Europe, America and Africa.

The greatest concentration of ancient rock paintings in the world is in Africa, south of the Zambezi River. Whereas the rock art of Europe lies hidden deep in caves requiring artificial lighting, the rock paintings of southern Africa are to be found in sun-drenched cliff caves and on almost any kind of rock face that has the slightest protective overhang. There are over 2,000 known sites in South Africa, besides those of Rhodesia, Botswana, Swaziland and South-West Africa. One area, the Ndedema Gorge in South Africa's Drakensberg Mountains, has 16 sites containing 3,000 paintings. The indication is that this rock shelter, hidden in the gorge, was the home of Bushmen for quite a long period. This gave the artists plenty of time to indulge their tastes in interior decoration, so much so that some murals cover very large areas and contain a multitude of both animal and human figures.

Who Were the Artists?

Although the exact identity of the artists remains a subject for debate, the works of art are generally known as Bushman paintings. The aboriginal Bushmen once were the sole human inhabitants of South Africa, and they preceded, apparently by many centuries, the Negroid types that later migrated down into southern Africa. The Bushmen were short in stature, with skin of a yellowish tinge. Because of the similarity of their skull types, they have been associated with the Pygmy skulls found from Egypt to the Cape of Good Hope. The Bushman's most notable physical feature was the extreme-



ly fat buttock, found in both men and women.

An early Arabic description dating from about 1150 of the Common Era describes these primitive inhabitants of southern Africa and says that their "speech resembles whistling." This could have been a reference to the language clicks, which many present-day black tribes retain as an inheritance due to the mingling of the early Negroid migrants with the little Bushmen.

In spite of such unusual speech, the Bushmen have shown by their rock paintings that they had keen powers of observation, a sense of humor, and a more sophisticated existence than researchers had realized. Nevertheless, these little people lived a simple life. Apart from game hunted with their bows and arrows, their diet included seeds, berries, roots, insects and reptiles. Being nomads, they lived in caves and shelters under rock ledges. Right there, in their primitive homes, they made the delicate paintings that are a record of their way of life. The early British researcher G. W. Stow was the first to realize that these works of art were a series of pages from the history book of South Africa.

What Do the Pictures Say?

Unlike the rock art of Europe, which concentrates on aspects of the hunt, the

African artists showed great interest in man and recorded his activities of daily life—some tragic, others humorous. The Bushmen engaged in hunting, fishing and dancing, and played primitive musical instruments. They held religious ceremonies and, yes, they got drunk, too. Although the artists' observations of animal and insect life were outstanding, they excelled in portraying human activity. Hunting scenes are numerous, since the search for food took up most of a family man's working day. The women usually are depicted carrying the digging sticks with which they searched for food. But occasionally they also joined in the dance.

At times the artist treated his subject in a somewhat lighthearted way, and one such scene shows the elated hunter giving a sign of victory as he flings his arms wide open and presents to his fat wife the rewards of his working day—three dead buck. Another picture depicts a successful hunter about to cut into the soft underbelly of a dead eland. Why, the hunter's toes are curled up in anticipation and large drops of saliva are dripping from his hungry mouth!

Sometimes tragedy made the rock "headlines." A scene from the Matopos in Rhodesia shows the unhappy end of a lion hunt with one arm of the vanquished hunter lying in front of a fearsome-looking lioness. Another drawing depicts a mur-

der being committed. The victim is having his head smashed in by a stone-wielding assailant, while a second foe shoots arrows into him. We wonder, Was the artist one of the attackers, or merely a 'rock reporter' recording the day's events? There is also the ever-present question, How many years have passed since any of these scenes were painted?

Difficulties of Accurate Dating

Among the problems that have prevented accurate dating is the fact that none of the wall paintings is covered by datable deposits. Besides this, some pictures have been superimposed on others, and where primitive implements can be recognized, they have a time range of up to thousands of years. The earliest date Dr. E. Denninger ascertained for a painting in the Ndedema site is within 200 years either way of 1150 C.E. or about 350 years before the Portuguese navigator Vasco da Gama rounded the Cape. Later paintings showing ships, horses and wagons can be dated historically with the arrival of the white settlers in the 17th and 18th centuries.

But, by that time, according to some opinions, styles and techniques had retrogressed. In his book *The Artists of the Rocks*, the South African painter Walter

Battiss says regarding the techniques of foreshortening and perspective: "Uccello, in Italy, during the Renaissance was only rediscovering and re-inventing what they [the Bushmen] had long possessed." Battiss suggests that the technical development of the earliest Bushman painters preceded by many years the frozen styles of the Egyptian dynasties. "Rock engravers and painters were at work in Africa before the pyramids were built," he says.

Was There an Ancient Link?

Whether there was an ancient link between the primitive art of Egypt, the rock art of Europe and the rock paintings of southern Africa remains another mystery. But some Bushman paintings seem to present evidence of North African or Middle Eastern connections.

A scene found in the Makgaberg Mountains of the northwest Transvaal presents problems as to both time and place. It would appear to represent a court scene depicting five European-type figures in long white robes and wearing tiaras and turbans. They are offering gifts as tribute to a personage whose form is unclear, and they are bent over in a reverential position. The dignitaries give every appearance of being Persian, and since the Islamic faith forbids representation of the human figure, the picture probably depicts a scene from pre-Islamic times. Because the site is 480 kilometers (298 miles) from the nearest shore of the Indian Ocean, the question arises, When did the aboriginal Bushmen view the sophisticated court scene involving people of a different culture from a distant land?

Discussing a similar painting nearby, Professor Raymond Dart, in a foreword to Harald Pager's book *Ndedema*, sees in another tiara-wearing figure a resemblance to Zeus, the mythical god of thunder. Legend has it that Zeus, in the form of a white

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bull, invited the maid Europa onto his back and then carried her off to the island of Crete. Surprisingly, an African legend tells of a young woman who, upon climbing onto the back of the rain bull, was carried away by it.

Also puzzling is the Bushman's association of dragons and rain gods, and there is a resemblance to the earliest Babylonian idea of the dragon goddess Tiamat. The same concept is to be found in China. This bears a remarkable likeness to the African artists' illustrations of a horned, smoke-breathing, flying dragon that they associate with thunder.

Techniques and Materials Used

Whatever time period was covered by the paintings, the matter of their preservation also presents food for thought. The artists took no particular trouble to place their paintings out of the reach of either their fellowman or the elements. Yet, in most cases, the colors remain fresh and the outlines clear and discernible.

The colors were obtained from earth pigments, charcoal (from burnt bone), iron oxide, lime and chalk, as well as red and yellow ocher. These were mixed with fat, animal blood or birds' eggs, and also with plants yielding latex or resin. The painters made brushes from feathers, bones, sticks or hair. Hollow bones or small horns held the paints, and some archaeological sites have yielded slate palettes.

The Last of the Bushman Painters

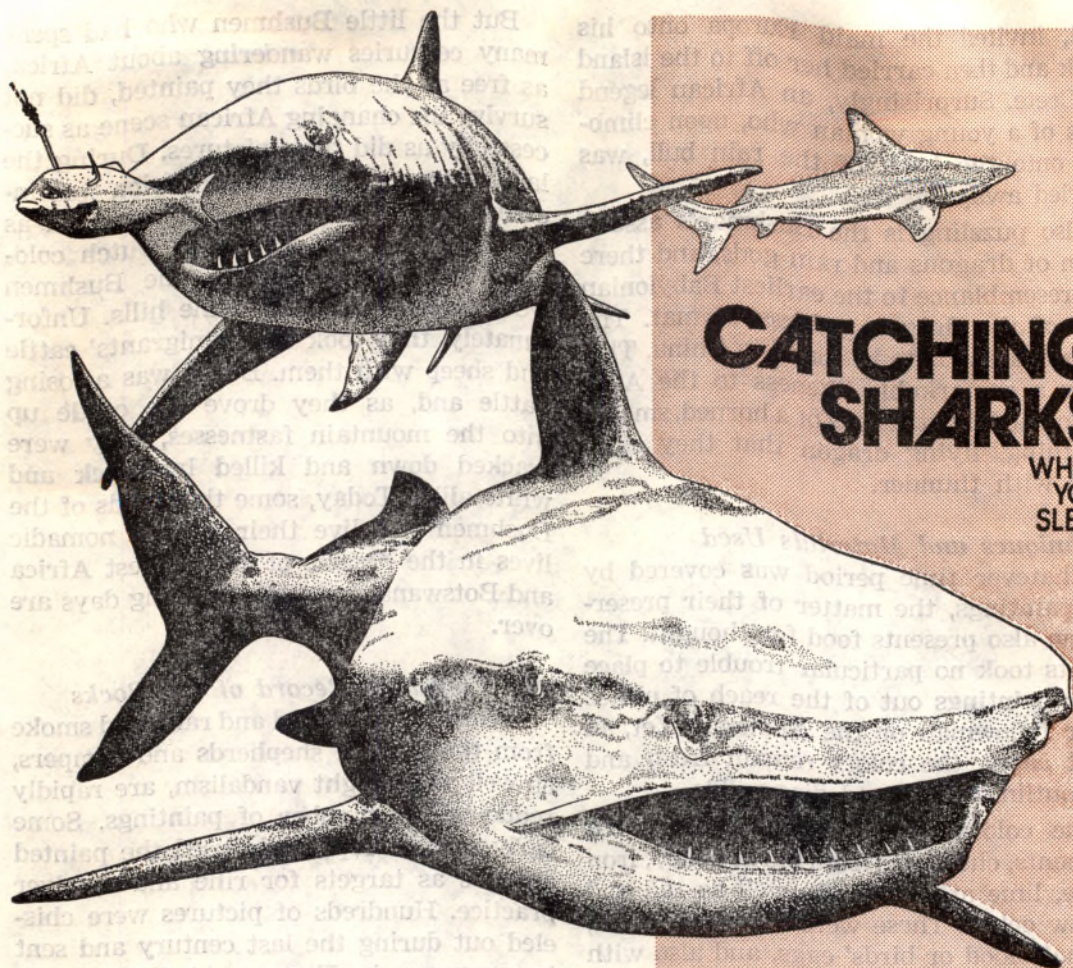
During the latter half of the 19th century, English researcher G. W. Stow mentioned two Bushman painters who had small horn paint pots hanging from their belts. A very old Zulu remembered that Bushmen were living in mountain caves during his boyhood in about 1888, and that they were still painting their pictures at that time.

But the little Bushmen who had spent many centuries wandering about Africa, as free as the birds they painted, did not survive the changing African scene as successfully as did their pictures. During the last centuries, as southern Africa was increasingly settled by black races such as the Zulus, as well as by the Dutch colonists and British settlers, the Bushmen were forced farther into the hills. Unfortunately, they took the immigrants' cattle and sheep with them. But it was a losing battle and, as they drove the cattle up into the mountain fastnesses, they were tracked down and killed by black and white alike. Today, some thousands of the Bushmen still live their simple, nomadic lives in the deserts of South-West Africa and Botswana; but their painting days are over.

The Vanishing Record of the Rocks

Weathering by wind and rain, and smoke from the fires of shepherds and campers, as well as outright vandalism, are rapidly reducing the number of paintings. Some early settlers reportedly used the painted animals as targets for rifle and revolver practice. Hundreds of pictures were chiseled out during the last century and sent to museums in Europe. At times, well-meaning enthusiasts have chalked over drawings, penciled in outlines or washed down the paintings in order to produce "better" photographs.

All of this has brought about much-needed action on the part of art lovers and archaeologists who, backed by acts of Parliament and government notices, have been moved to preserve the last of the Bushman paintings. Nevertheless, these masterpieces by primitive but talented artists of the past still provide a captivating and valuable record of African history. They also present a challenge to all those seeking to solve Africa's intriguing riddle of the rocks.



CATCHING SHARKS

WHILE
YOU
SLEEP

As told to "Awake!" correspondent in the Leeward Islands

THE alarming cry "SHARK!" generally sends the most stouthearted persons scurrying for safety. For us West Indian fishermen, however, such an alert can often mean meat on the table and a sizable profit.

Capturing one of these man-eaters, though, is no simple task. And I am convinced, after 32 years of earning my living as a fisherman, that the safest way is what I call my "sleeping method." It is a way

to catch a shark while you sleep. Permit me to explain.

Some years ago I began fishing with traps made of wire mesh stretched over a wooden frame. These are hexagonal in shape and are constructed with tapered entrances through which fish and other sea creatures enter, thus becoming trapped. Generally four feet (1 meter) in diameter, the traps are anchored to a heavy stone. I deposit them some two miles (3 kilo-

meters) offshore from my home island of Anguilla in the Caribbean Sea.

However, I faced a continuing problem with large sharks. They would ram my traps, destroying them; and then the sharks would gorge themselves on the released fish. Smaller sharks sometimes penetrated the entrances to these traps and devoured the contents.

Frustrated after waiting for hours one night to catch one of these thieves on a baited line, I began reasoning: Why not set a trap for Mr. Shark and catch him with ease while I myself am peacefully sleeping at home?

I devised a plan for doing this, but my fishing partner was skeptical. Knowing Mr. Shark's violent nature under normal circumstances, my partner felt that we would be much farther ahead not risking our necks in exchange for a few salvaged fish. Certain, though, that it was not as risky as he imagined, I began gathering equipment to put my plan into action.

A Simple but Effective Trap

The trap itself was a simple one. I took a 20-foot (6-meter) length of steel wire 3/16 of an inch (.5 centimeter) in diameter and fastened it to a stone weighing 40 pounds (18 kilograms). I tied the other end to a large piece of wood that would serve as a buoy. To the other end of this wooden buoy was attached a second length of the same steel wire. At its far end was a large fishhook with fish as bait. Then the stone was pitched to the bottom of the sea near my traps (12 feet [4 meters] below the surface), leaving the buoy floating atop the water. Next, I began rowing ashore slowly, more confident than ever of a big catch if Mr. Shark came prodding around my fish traps.

The following morning my partner and I went out to sea as usual. About 500 yards (460 meters) from the buoy I observed immediately that one end of it was up and

the other submerged. Much to our delight, we found half of a five-foot (1.5-meter) shark on the hook. A larger shark had eaten the other half. Since employing my method, I have caught over 500 sharks, including such types as lemon, black tip, bull, brown, nurse and kingfisher. They range from three to 10 feet (1 to 3 meters) in length.

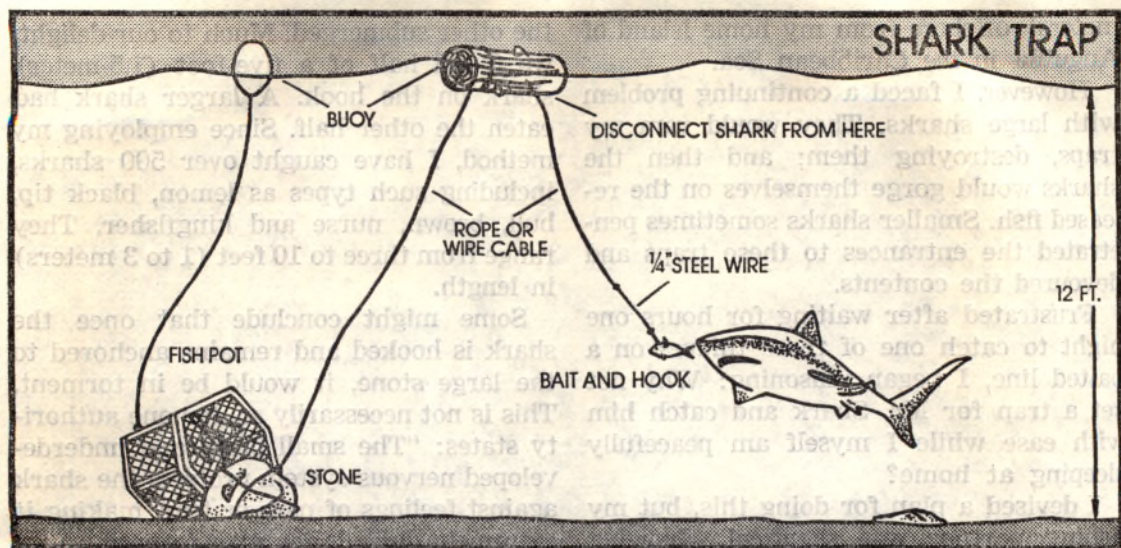
Some might conclude that once the shark is hooked and remains anchored to the large stone, it would be in torment. This is not necessarily so, for one authority states: "The small brain and underdeveloped nervous system protects the shark against feelings of pain or fear, making it extremely difficult for man to produce an effective device for shark defense."

However, it would be unwise to think that just because a shark is hooked, it is a simple thing to land it while it is still alive. This is definitely not an easy task.

No Job for the Fainthearted

Allow me to relate two of my most trying encounters with 10-footers. The first was with a large blacktip, identifiable by a black dot on the extremity of the fins. Approaching the buoy near the fish traps, I noticed one of these huge creatures hooked to my special trap. My partner warned that we should not touch it, because it appeared to be too big for our little 10-foot boat. By observing the creature through a diving mask, I could see that it was tired and was floating upside down at the bottom.

Despite my friend's protest, I felt certain that, if it could be surfaced in the same position (with its belly up), we could capture it. With the aid of a long grappling hook, I gently raised it to the surface. Happily, it showed no sign of fight. Soon, the white underside was alongside the waterline of our skiff. Quickly, we disemboweled the shark! This exposed its two layers of liver. And these provided suffi-



cient buoyancy to keep the carcass afloat while we towed it ashore.

Landing a Kingfisher

An example of the dangers involved can be seen from my experience with a 10-foot kingfisher shark several years ago. Upon approaching the location where the man-eater had ensnared itself, I proceeded cautiously so as to make sure that it was properly hooked. Upon observing its size, however, I was somewhat doubtful of my ability to handle this shark all by myself in such a small boat. But the thought of realizing nearly two months' wages (\$700 in our local currency, or \$269 U.S.) from a fish of this size emboldened me. After looking over the situation again, I decided to disconnect from the buoy the rope to which the shark was hooked, and then to tow the fish to shore.

Now the hard work commenced. With the monster in tow, I began forcing all my 202 pounds (92 kilograms) into the oars, heading for the nearest bay about 500 yards (460 meters) distant. At first, there was little difficulty. Mr. Shark followed like a lamb. But at about 100 yards (90 meters) from the beach, this fellow

started putting up stiff resistance, yanking the little boat in a zigzag fashion and violently churning the water. The more the shark tugged, the more desperately I pulled on the oars.

After getting to within 12 feet (4 meters) of the shore, I leaped into the surf up to my waist, still hanging on to the rope to which the shark was hooked. Wrapping the rope around my waist and arms, I continued straining backward until the shark's head rested on the sand about two feet (.6 meter) from the water's edge. After beaching the boat and securing the rope to it, I began searching frantically for something with which to kill the giant fish. Yet nothing was in sight. Running some 450 yards (410 meters), I finally discovered a large piece of driftwood. To my disgust it disintegrated with the first blow at the shark, with the result that the giant began thrashing about in the water and sand.

Desperately, I again ran in search of a weapon, this time at least 600 yards (550 meters). Coming back with a solid wooden club, I managed somehow to conquer the kingfisher. Tired and dragging, I attempted to roll this 650-pound (290-kilogram)

giant into the boat in order to transport it to a place where I could get assistance. But it would not budge. As a last resort, I decided to refloat this fellow, towing the shark behind the boat for about 3/4 mile (1.2 kilometers) to a point where further assistance was available.

Useful Indeed

All parts of this dangerous sea creature are edible, except its razor-sharp teeth. In the islands, news of a shark catch gets around quickly and housewives come right to the boat to purchase portions for their meals. Some prepare Mr. Shark in stews, casseroles and steaks. Perhaps shark-fin soup is more to your fancy.

You may be surprised to learn that the liver of some sharks accounts for nearly 10 percent of the entire weight. I have seen shark livers five feet (1.5 meters) long and nearly three feet (1 meter) in width. They had been hung in the sun to

drip their precious vitamin-rich oil. It takes about two weeks to extract all the oil. However, if a boiling method is employed, the time is much shorter. Some fishermen prefer to do this in an isolated place because of the offensive odor. On the average, shark livers of this size produce as much as 30 to 40 quarts (28 to 38 liters) of oil. Islanders use it in efforts to combat illnesses such as head colds, epilepsy, pneumonia, rheumatism and a host of other ailments.

No, I have not been bitten by a shark to date, although once, while butchering one, I scratched my finger on a tooth. The pain from that tiny scratch lasted for hours, convincing me that a shark's bite can spell certain death.

Hereabouts, the cry "SHARK!" is not often heard of late. I assume that we have caught most of the big ones. Or perhaps sharkdom has spread a word of warning about my "sleeping technique."

Just Spray It On?

DESCRIBED as miracles of convenience, aerosol sprays are now used to paint, manage hair, clean ovens, kill pests and most often make a person "smell good." Yet, despite their popularity, aerosol packaging is being increasingly criticized as dangerous. Why?

While the danger of the can's exploding if heated has been long recognized (most aerosols have a warning on the can), recent criticism points at the vapor (mist) and the chemical content. "The fastest way to absorb a chemical into the body (aside from injecting it directly into a vein) is to inhale it," states one report. The propellant or gas in most aerosols is a fluorocarbon, and some authorities think that inhaling it is dangerous, especially for people with allergies and lung or heart disease. In the United States, one propellant (vinyl chloride gas) has been linked with a rare form of liver cancer and so over 100 aerosol products containing it have been banned or voluntarily withdrawn from sale.

It is also claimed that the propellants can burn or inflame exposed areas when, for example, a deodorant spray is applied too close to the skin. In some cases spray in the eyes can result in permanent scarring.

In addition to possible health hazards, critics also point out that the aerosol packaging is over twice as expensive as the same product in a simple container. The buyer must pay for the strong can, the spraying devices and the propellant.

But while the debate continues as to whether to outlaw these sprays altogether, how should an aerosol spray be handled if you do use one? Here the experts agree. Spray in a well-ventilated area. Keep the spray away from your eyes and then as quickly as possible leave the area where you did the spraying.



See LONDON

—atop a double-decker bus



By "Awake!" correspondent in the British Isles

"THE way to see London is from the top of a bus—the top of a bus, gentlemen." That was the advice that William Ewart Gladstone, prime minister of England, gave to some American visitors during the 19th century. Today we do not have horse-drawn buses clip-clopping around London. Instead, their bright-red, diesel-engined "grandchildren" await us. Shall we go upstairs and join the millions who have taken Gladstone's advice? Come on! See London—atop a double-decker bus!

The London Transport Executive provides this daily service that affords visitors a fine two-hour sight-seeing trip. At regular intervals, commencing at 10 a.m., you can get your ticket and board a bus at Marble Arch, Victoria Station or Piccadilly.

Marble Arch to Lambeth Bridge

Since we are starting from Marble Arch, our first point of interest is this triple arch with its wrought-iron gates. Patterned after the Arch of Constantine in Rome, Italy, it now stands near Tyburn,

the site of public executions until the end of the 18th century.

Ah, we're moving off! Turning along Bayswater Road, we retrace London's first public tramway, laid down by that enterprising American, George Train. The green 360 acres (146 hectares) of Hyde Park have provided fresh air and water for Londoners since the 11th century, when King Edward the Confessor granted the land and its springs to Westminster Abbey. Today a forum for public speakers at famed Speakers' Corner, it has seen in the past military reviews, exhibitions and even a reenacting of the Battle of Trafalgar on the Serpentine Lake.

Passing through Kensington, we arrive at the Royal Albert Hall. *Elliptical in plan* and styled after a Roman circus, this is one of London's famous auditoriums. Still mentioned is a public address given here in 1920 by the Watch Tower Society's second president, J. F. Rutherford. Its title? "Millions Now Living Will Never Die." Speaking in this hall six years later, the same speaker drew world attention to the fact that the League of Nations did not

have divine approval. How history has established his Bible-based words!

Just to the right of the Royal Albert Hall is Exhibition Road, at the far end of which you will find four popular museums featuring science, geology, natural history and industrial art. A day in London can profitably be spent there. Our bus takes us on into Knightsbridge, passing a number of London Squares, gardens belonging to neighboring residences and adding a welcome dash of color.

Ahead of us are the gardens of Buckingham Palace, residence of the British sovereign. Along we go, through Pimlico, to link up with Royal Hospital Road, Chelsea. Reportedly, the hospital for pensioned soldiers was suggested to King Charles II by actress Nell Gwynne. Be that as it may, its occupants with scarlet coats and glinting medals of old campaigns brighten the London scene.

But what is that ahead of us, glistening

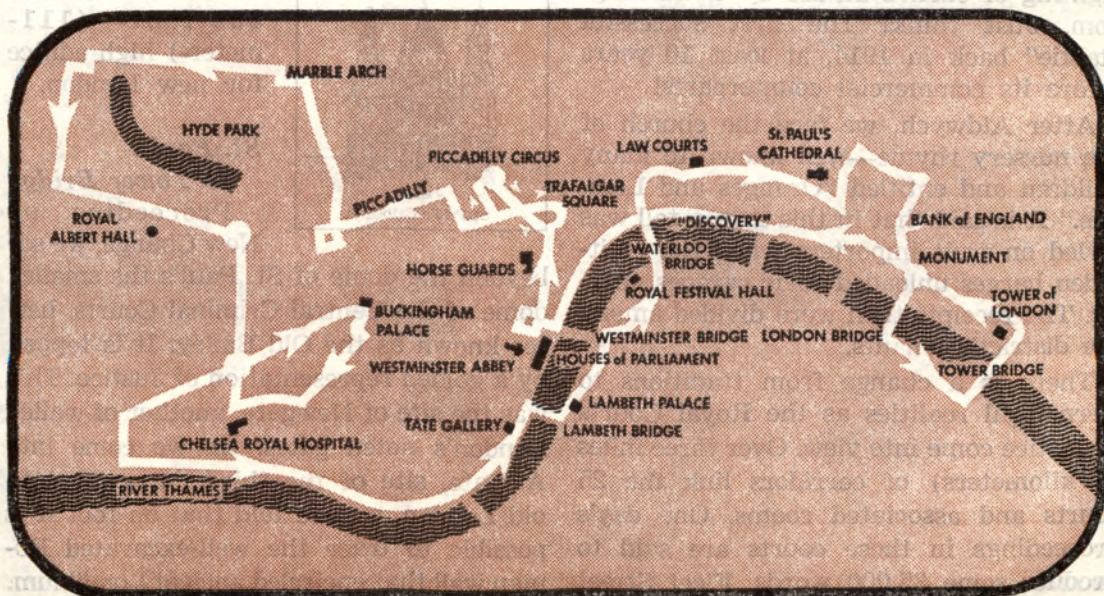
in the sun? Why, it is our first glimpse of "Old Father Thames"! Chelsea Embankment follows that world-renowned river, and it is relaxing to drive through this tree-lined avenue to Millbank. There, to our left, is the Tate Gallery, one of London's finest art museums.



Lambeth Bridge to St. Paul's

We now cross the Thames, riding over Lambeth Bridge.

Before us is Lambeth Palace, official London residence of the archbishop of Canterbury. Attention may be focused on its Lollards' Tower. Why is it so called? Well, it was named after the Lollards, followers of the 14th-century Bible translator John Wycliffe. Equipped with handwritten English translations of parts of the Bible, they spread across the countryside preaching to all who would listen. Vehemently opposed by the established church, often they were arrested and imprisoned—some say in this very tower.



Looking across the Thames, we see the stately Gothic facade of the Palace of Westminster, better known as the Houses of Parliament. This building is just over 120 years old, but the Abbey standing behind it dates back to the 11th century.

Passing Westminster Bridge and the County Hall, general offices of the Greater London Council, we cross Waterloo Bridge, skirting the Royal Festival Hall and other South Bank concert halls. Across the Thames once more, we reach Aldwych, which is the Anglo-Saxon term for "old village." It reminds us of the humble origins of this great metropolis.

At the middle of this graceful crescent, do you notice Kingsway? Along there used to be the old London Opera House, erected by Oscar Hammerstein at the beginning of the century. Incidentally, it was there, in October 1914, that the Photo-Drama of Creation was shown. That film and slide production taking four evenings to present made use of motion pictures synchronized with phonograph recordings. Produced by witnesses of Jehovah, the Photo-Drama covered Bible history from creation to the righting of earth's affairs by God's kingdom. Just think! The first successful "talkie" back in 1914, at least 10 years before its commercial counterparts!

After Aldwych, we face the church of the nursery rhyme—well known to many children and entitled "Oranges and Lemons." It is said that in this area a toll was levied on fruit importers when the fruit-laden barges unloaded their cargoes nearby. The receipts then were divided among the district's tenants.

There is a change from traditions to stern legal realities as the Royal Courts of Justice come into view. Over three miles (5 kilometers) of corridors link the 25 courts and associated rooms. One day's proceedings in these courts are said to produce some 35,000 words. Fleet Street

now draws our attention. This is a district of words if there ever was one! Today printer's ink virtually flows in a tide of words where the Fleet River ran 200 years ago. In this area are the editorial offices and printing works that produce London's newspapers. Tucked away in Gough Square you will find the well-preserved house of Dr. Samuel Johnson, the famed lexicographer of the English language.

Now we ascend one of the city's few hills, Ludgate Hill. Centuries ago, an arched gateway called "Ludgate" would have halted our progress. Ludgate was one of the seven principal entrances into the old city. Continuing up the hill, we face Sir Christopher Wren's architectural masterpiece, St. Paul's Cathedral. Uncertainty shrouds the history of earlier buildings on this site, but the Great Fire of London in 1666 destroyed the previous cathedral that had fallen into disrepair and disrepute. A few days before the fire broke out, Wren had been inspecting the building with a view to its restoration. Ironically, it was tax on coal brought up the

Thames that mainly financed Wren's 365-foot- (111-meter-) high edifice for new London.



**St. Paul's
to Tower Bridge**
Proceeding up
New Change, we see

beyond the dome of St. Paul's the smaller dome of the Central Criminal Courts, better known as the Old Bailey. It is topped by a golden representation of Justice. This was the site of Newgate, another of walled London's noted gates. As we come into Aldgate, site of the third entryway into old London, we are told that on foot it is possible to trace the well-excavated Roman wall that encircled ancient Londinium.

Along Moorgate, position of yet another entry, we reach the financial center crowded *with* banks, as well as insurance and investment companies. On the left is the Bank of England, founded in 1694 by William Patterson. Twice rebuilt, it has operated from here since 1734. Just past the Bank, we see the eight Corinthian columns of the Royal Exchange where, in 1567, Thomas Gresham erected a building used by London's merchants for the transaction of business. The London Stock Exchange is just a city block to the rear.

The colonnade to the right fronts Mansion House, since 1753 the official residence of the Lord Mayor of London and now more famous for its stately banquets. Our next obvious landmark is the memorial of the Great Fire. Two hundred and two feet (62 meters) high and crowned with its shining golden urn of sculptured flames, The Monument recalls London's devastating blaze of 300 years ago. Property then destroyed included 13,200 houses, 89 churches and 400 streets. Yet, only three people are said to have died in the holocaust.

Ahead of us is the substantial descendant of the nursery rhyme topic—London Bridge. Reportedly, a bridge was standing here in 43 C.E. But it was the fifth bridge constructed here that is remembered in the words, "London Bridge is broken down!" You see, the severe winter of 1281 brought great chunks of ice down the Thames, causing five of the arches to give way. Until 1738 this was London's only bridge, but Parliament then consented to the building of a second bridge, at Westminster.

Turning up Tooley Street, we pass through a compact area of warehouses and emerge at Tower Bridge, a truly



Tower Bridge

grand sight. Opened in 1894, this half-mile- (.8-kilometer-) long structure has two hinged bascules, each weighing 1,000 tons. To allow passage of ships, these are raised in just one and a half minutes. Crossing the bridge, to the left we see one of Britain's oldest and most celebrated fortresses, the Tower of London. During its checkered 900-year history, the White Tower, marked by the four turrets, has at different times been a palace, a prison, the Royal Mint and even a zoo.



Tower of London

What stories it could tell! Today the Tower of London simply safeguards the sovereign's crown jewels, which are on public display.

Entering Eastcheap, we are reminded of the Anglo-Saxon *ceap* (meaning to barter or purchase), as this was the site of earlier meat and provision markets. Going on, we come to Cannon Street. No, it has nothing to do with medieval armaments. Instead, a document of 1311 mentions 'Kandelwickstrate,' because candles and their wicks were made here. The Londoner's habitual shortening of names soon reduced it to "Cannon Street."

Queen Victoria Street leads us back to the Thames again. To your right are the Temple Gardens, land that once belonged to the Knights Templars. They were a 12th-century religio-military order whose original interest was guarding the roads and protecting pilgrims journeying to the "holy places" in Jerusalem. The order was dissolved in 1312 and the property went to a body of lawyers. On this land were built the schools of law: the Inner Temple, Lincoln's Inn and others. Barristers and lawyers still have their "chambers" here.

The ships moored alongside the Embankment have attracted your attention.

Most picturesque is the vessel last in line, the three-masted bark-rigged whaler that is now a floating museum. This is the famous "Discovery" commanded by Captain Robert Falcon Scott on his 1901 expedition to the South Pole.

Passing beneath Waterloo Bridge, watch for the slender granite obelisk known as Cleopatra's Needle. Like a nut in a metal shell, it was floated from Egypt just over 100 years ago. In 1450 B.C.E. this pillar stood outside the Temple of the Sun at Heliopolis, having only the most remote connection with Cleopatra.

What is that? The rich boom of the hour being struck was sure to make you look around! Well, look up 316 feet (96 meters). Yes, that is Big Ben. This giant clock was named after Benjamin Hall, the Commissioner of Works at the time of its construction.

Big Ben to Hyde Park

Rounding Parliament Square, we enter Parliament Street and are confronted by the Cenotaph, that solemn memorial commemorating the tragedy of the two world wars. As its name in Greek implies, nobody is buried here, for *kenos* means "empty" and *taphos* means "tomb." A quick look to the left and we see Number 10 Downing Street, London home of prime ministers since Robert Walpole in 1735.

The Horse Guards now come into view. A number of mounted regiments assigned to be Life Guards to the sovereign can be seen on duty here, seated on magnificent black horses. Every morning at 11 o'clock, with precision of movement, a colorful ceremony takes place—the changing of the Guard.

Continuing up Whitehall, we change from Army to Navy as there looms before us the 185-foot- (56-meter-) high monu-

ment to the naval victor of the battle of Trafalgar, Lord Nelson. Behind it you can see another of London's splendid art galleries, the imposing National Gallery.

From Trafalgar Square, we make a detour to Piccadilly Circus, the center of London's West End. Here we see the much-photographed statue of Eros. This nine-foot (3-meter) aluminum figure does not represent the god of erotic love, but, rather, 'Charity flying as quick as an arrow to help'—a symbol to commemorate Lord Shaftesbury's work in aiding the poor. Back down Haymarket, we rejoin Pall Mall. Such an odd name! Some 300 years ago, you would have observed a French ball game—*pallemaille*—being played here, and therein lies the name's origin. The red-brick clock tower next claiming our attention is all that remains of the original structure of St. James' Palace, built at the command of King Henry VIII.

Riding alongside Green Park, we are now in Piccadilly itself. Webster's Dictionary of 1858 tells us that a piccadilly was "a high collar or kind of ruff." What is the connection with modern London? Well, a 17th-century reference work says that a retired tailor who sold such collars lived here in a house known as Piccadilla Hall.

But look there, ahead of us! Yes, that is Hyde Park once again. Our bus-top tour of London is over. Up here we have had a front-row seat in viewing the stage as 19 centuries of history have passed in review. Why not plan for such a trip when you come to London for the "Victorious Faith" International Convention of Jehovah's Witnesses this year? Gladstone was right. The way to see London is from the top of a double-decker bus!

"What Time Is It?"

"WHAT time is it?"
"Exactly 8:30,"
was the reply. "Thank
you, I have to catch a
train, and my watch
stopped."

Today such precise
time consciousness is
taken for granted. Dur-
ing much of man's his-
tory, however, concern
about seconds, minutes
and even hours was un-
known. Eventually,
though, efforts were
made to measure short
periods of time.

Doubtless the earliest
time measuring device
made by man was the
sundial. Its basic disad-
vantage is well expressed
in the proverb: "Do like
the sundial. Count only
the sunny days." For
greater dependability, a
timepiece was needed
that could function with-
out the benefit of fair
weather. The water
clock, later called a clep-
sydra, filled this need. As
water flowed from a ves-
sel through a small open-
ing into a cylinder, the
gradually rising water

level in the cylinder furnished the basis for reading time.

The sand clock or hourglass worked according to the
same principle. It is still used occasionally as a timer for
boiling eggs. Then, there was the oil clock. The oil served
as fuel for a lamp, and time could be measured by how
much oil was used up.

Both sand and oil clocks had their limitations. For one
thing, they did not function properly when moved about.
As time passed, men began to recognize that there was
a need for a portable clock that would continue to measure
time. This was first possible with the discovery of the wheel
clock, the next step in the development of measuring time.

The Wheelwork Clock

Large wheelwork clocks are mentioned in Dante's *Divine
Comedy*, written in the 13th century. These clocks were
used extensively in the 14th century. The first portable
clocks can be traced back to the mechanic Peter Henlein of



By "Awake!" correspondent in
the Federal Republic of Germany

Nuremberg, Germany. Around the year 1500, he developed the first pocket watch. It ran for 40 hours and struck every hour.

Since then many improvements have been made. Dependability and accuracy have been perfected, weight has been lessened and mass production has been introduced. As a result, the clock has come into universal use.

But just how accurate can a wheelwork clock be? Shocks, temperature changes, positional errors and those of isochronism affect the accuracy. What is considered to be a very accurate wheelwork clock is one that varies no more than 0.6 of a second per day with a temperature change of one degree Celsius.

More Precise Timepieces

However, today's high degree of mechanization, automation and scientific research demand a more precise time measuring device. The first real breakthrough in this field was the development of the quartz-crystal clock. It was introduced to the world in 1934. The quartz-crystal clock surpassed the accuracy of the precision pendulum clock, being about 10 times as accurate.

How does it work? While there are various systems, the basics are always the same. The vibrations of a quartz crystal determine the frequency of an alternating current. This current can be amplified and reduced by a frequency divider and, by means of mechanical gearing, can be applied to a clock dial. Let us say, for example, that a quartz crystal has a vibration frequency of one megahertz (one million cycles per second). This would mean that it vibrates one million times per second. It is possible to make these electrical

vibrations of a quartz crystal visible on an oscillograph.

Doubtless you have seen the mechanism of a clock or a watch and may have noted that the rapid movement of the balance wheel is converted to the slower movement of the second hand. This reduction is accomplished mechanically. In a quartz clock, however, it is achieved electrically. The frequency is divided progressively until it can drive a synchronous or step motor that is connected to mechanical gearing and is applied to a clock dial, or until it can show time by means of an electrical digital display. In this way, it would theoretically be possible to keep error down to 0.0001 second per day—an error of only one second every 10 years. However, quartz begins to vibrate more rapidly as it gets older, thus affecting the accuracy of the quartz-crystal clock.

Hence, for certain scientific research, a more precise time measuring device is essential. The atomic clock fills this role. Such a clock measures the frequency of light that is either given off or absorbed by molecules or atoms. There are atomic clocks that are expected to vary only one second in 1,000 years, or even one second in 100,000 years.

But let us pause for a moment. If not working in a laboratory or some scientific institute, would a person be concerned with one millionth of a second? Often when on a vacation or doing enjoyable work, people tend to forget about time. Also, who would want to know what time it is when viewing a spectacular sunset? Hence, depending on circumstances, the question, "What time is it?" may be either appropriate or out of place.

The Bible's View



'Eye Has Not Seen Nor Ear Heard'—What?

CLOSE your eyes and imagine the most beautiful scene you can," said the minister to his audience, "and the blessings of the New Order will be even grander, for the apostle Paul said, 'Eye has not seen and ear has not heard, neither have there been conceived in the heart of man the things that God has prepared for those who love him.'" Certainly such was a thrilling prospect. But is this what the apostle Paul had in mind at 1 Corinthians 2:9? Was he talking about the unimaginable blessings of God's new order? If not, then to what was he referring?

Let us consider the context. The apostle addresses the congregation at Corinth. According to Bible commentator Matthew Henry, "Some of the ancients tell us that the city abounded with rhetoricians [speech makers] and philosophers." Influenced by so-called 'wise men' and 'debaters,' some in the congregation may have endeavored even to imitate these philosophers with the same "extravagance of speech."—1 Cor. 1:20; 2:1.

The apostle Paul shows that such wisdom of the world is foolishness with God, and then he reflects on his own teaching. No, not with "persuasive words of [men's] wisdom" did he teach them. He

preached something of *real importance*. "We speak God's wisdom in a *sacred secret*, the hidden wisdom, which God foreordained before the systems of things for our glory."—1 Cor. 2:4, 7.

This "sacred secret" or "hidden wisdom" is far superior to anything contrived by men. In fact, it contains knowledge of things God had purposed before any of the nations existed, "before the systems of things." It was at that time, after the sin of Adam and Eve, that God "foreordained" or purposed a deliverer for mankind. In the first recorded Bible prophecy, he foretold that the "seed" of the "woman" would "bruise" the head of the superhuman creature who, by means of the serpent, misled Eve, resulting in a world of sin and death. Such bruising would mean a crushing of Satan and the removal of all the human 'groaning and pain and futility' and pave the way for a righteous government to rule all mankind. This would really solve man's problems and vindicate God's name.—Gen. 3:15; Rom. 8:20-22.

But who would this "seed" be? This remained unanswered for centuries. Finally it became apparent that it was none other than Jesus Christ. How faith-strengthening now to know that the great Deliverer had appeared and that through his resurrection we have a guarantee of the removal of sin and imperfection!—Acts 17:31.

What philosophy of men could compare with this profound truth? It was of such importance that, had the rulers of that day known of or accepted in faith this "sacred secret," they would not have "impaled the glorious Lord," argued the apostle Paul. The death and resurrection of Jesus paved the way for all the other features of this great "sacred secret" to be realized, indicating the future complete undoing of Satan and his works.—1 Cor. 2:8; Heb. 2:14.

Who was it that knew this precious truth? Whose "eyes" had been opened and whose hearts

were receptive so as to appreciate the understanding of this vital "sacred secret"? "To us God has revealed [such] through his spirit," said the apostle Paul. (1 Cor. 2:10) It is not to the great men of the world, the intellectuals with their sophisticated "wisdom," but to humble persons whom God chose and who were helped by his spirit.

To stress what a blessed relationship they had, Paul quoted from Isaiah 64:4, saying: "But just as it is written: 'Eye has not seen . . .'" Is it not obvious by the setting of 1 Corinthians 2:9 that Paul was talking about having an insight into this "hidden wisdom," an insight that none of the rulers or those esteemed great in the eyes of the world had?

The setting of Isaiah chapter 64 provides further evidence for this conclusion. Isaiah describes how Jehovah performed wonderful acts for his friends. There was no other god 'heard of by the ear or seen by the eye' that really performed for those that 'waited for him' or had faith in him. Commentator Albert Barnes makes a similar observation, saying:

"The idea is in the Hebrew not what God has *prepared* or *laid up* in the sense of preserving it for the future; but what he had already done in the past. No god had done what he had; no human being had ever witnessed such manifestations from any other god. . . . The sense of the whole verse is, that God in his past dealings had given manifestations of his existence, power, and goodness, to those who were his friends, which had been furnished nowhere else."

Yes, His friends had an insight into God's activities that others in general did not have. They had opportunities to see intimately the outworkings of Jehovah's purposes.

Paul was now establishing a similar point with the Corinthian congregation. By the help of God's spirit, they had been privileged to understand the meaning of

God's "sacred secret." Out of all people, he had chosen to reveal these lofty thoughts to them.

Just think of some of the exalted truths that were revealed to those first-century Christians. Imagine knowing that a group would be taken from among mankind to become rulers with Jesus in heaven, to be a part of the "seed" of deliverance. Included in this would be even non-Jewish persons, people from all nations and races. How thrilling!—Gal. 3:29; Eph. 1:8-14; 3:5, 6.

One exciting thing after another was revealed to that class of humble disciples. So, let the so-called 'wise men' and philosophers of that day babble on with their "extravagance of speech" about nothingness. These Christians were unique possessors of the most important knowledge on earth.

Yet, after the first century, God did not stop revealing an understanding of his grand purpose. Consider some of the "deep things of God" that true Christians clearly see in these "last days." The knowledge that God's kingdom with Christ on the throne was established in 1914 and that Satan and his demons were cast out of heaven and are now bringing heavy woes to the earth is clearly understood by Jesus' followers today. Despite the agonizing conditions of this world, they today have a clear vision of God's new order of righteousness as being near at hand.

So the minister who quoted those words, 'eye has not seen nor ear heard,' should properly have pointed out that the apostle Paul was not here referring to the glorious things of the New Order that *their eyes and ears* might someday perceive. Rather, the apostle was calling attention to the treasures of spiritual wisdom relating to the 'sacred secret of the seed' that were beyond the comprehension of *the eyes and ears of unenlightened worldlings*.

Watching the World



Malawi and Religious Freedom

◆ When Life President Hastings Kamuzu Banda of Malawi recently visited Nashville, Tennessee, he paid a visit to the Riverside Adventist Hospital. There a Seventh-day Adventist official declared: "Thank you for the freedom that exists in Malawi for all religions to worship God according to the dictates of their own consciences." Banda himself gave the lie to such praise when he later said to reporters: "I told them [the Adventists] I prefer to go to heaven by way of the Presbyterian Church. But though I am a Presbyterian myself, I prevent no denomination from operating in Malawi, with one exception—the Jehovah's Witnesses." A photograph of President Banda accompanying the newspaper article was captioned: "Stressing Freedom of Worship." —*The Tennessean*, May 1, 1978, p. 15.

Meanwhile, Indiana University professors and members of the student government were protesting plans to award Banda an honorary degree. According to the *Indianapolis Star*, they accused him "of being a dictator who has ordered or condoned the repeated violations of human rights and basic freedoms, even murder of Jehovah's

Witnesses." A February 1 U.S. State Department report was cited as stating: "The most serious violation of internationally recognized human rights in Malawi has been the arbitrary detention, without trial, of large numbers of Malawi citizens and some aliens." The professors also noted that Banda's preferred title in English is "His Excellency, the All-knowing Conqueror."

Rather than demonstrating against Malawi's repression of their fellow Christians, however, "a delegation of Bloomington [Indiana] Jehovah's Witnesses met with T. Jake Muwamba, Malawi ambassador to the United States and the United Nations," reports the local *Sunday Herald-Times*. "The delegation said it wanted to express its concern for its 'brothers' in the African nation."

When questioned by reporters about his suppression of the Witnesses, Banda falsely claimed: "They will not pay taxes. . . . They don't believe in government at all." Yet Jehovah's Witnesses are known world wide for their honesty and obedience to law. And they do conscientiously pay their taxes, thus obeying Jesus' command to "pay back Caesar's things to Caesar."—Mark 12:17.

Why Ban Them?

◆ Recently London's BBC Africa Service carried a radio report by commentator Elizabeth Blunt on the banning of Jehovah's Witnesses in Angola. She stated that the banning was not because of any direct challenge to the State. "Instead," she said, "although they are willing quietly to accept the rule of law, they only give their loyalty to God, and refuse to take any active part at all in politics. . . . In African countries where mass political parties urge party cards on all citizens and expect all citizens to share in nation-building activities and to demonstrate positively their loyalty to the state, the Witnesses have been banned and often persecuted, although as individuals they are usually quiet, sober and hard-working."

North Pole Alone

◆ After dog-sledding alone for 57 days a distance of 477 miles (768 kilometers), Japanese explorer Naomi Uemura recently reached the North Pole. The 37-year-old adventurer had some modern aids during his trek, including airdrops of supplies, radio communication and satellite tracking of his position. But he overcame many obstacles alone, such as hacking through 30-foot- (9-meter-) high ice ridges, being trapped on a moving ice floe, -68 degrees Fahrenheit (-56 degrees Celsius) temperatures, high winds, a blizzard and a polar-bear attack. Reportedly, the hungry bear turned over Uemura's sleeping bag (with him in it) after destroying his tent and consuming his food supply. The explorer's wife remarked: "He is a continual surprise to me. At home he's afraid of cockroaches. Out there, he will confront a bear."

'Bastion of Discrimination'

◆ When U.S. President Carter met with representatives of the National Council of Churches of Christ, the group claimed that U.S. efforts

against South African apartheid and in connection with other "human rights" issues were too weak. Carter countered by saying: "I think there's a lot the churches can do that we are not doing. In many ways, the last bastion of racial discrimination is in the churches. The government has done a great deal to eliminate segregation . . . The churches have done much less. I recognize we have a long way to go in the government, but on balance the government has done a better job than the churches. I say this as a member of both."

Mexican "Beetles"

◆ After exporting the famous Volkswagen "Beetle" for some 30 years, the Federal Republic of Germany now has to import thousands of them from Mexico. German plants recently stopped producing the little car. They now produce other Volkswagen models, while plants in Mexico, Brazil, Nigeria and South Africa make "Beetles" in areas where demand for them is greatest. Of the almost 20 million produced since 1946, an estimated 13 million are still in use.

Postman: Blow Your Horn

◆ "According to Post Office regulations," reports the *Athens Daily Post*, "postmen should blow their trumpets when arriving in villages to inform those expecting mail that letters they were expecting may have arrived, and those wishing to post letters that the postman was at the village." This proper postal use of trumpets was recently confirmed in an announcement by the Hellenic Post Office.

Antarctica's First Native

◆ 'The world's first native Antartican' was born early this year, according to the Population Reference Bureau. The head of Argentina's Esperanza station near the South Pole is the boy's proud father.

Sweden Bans Aerosols

◆ As of January 1, 1979, aerosol sprays that use fluorocarbon propellants will be banned in Sweden. It is the first country to legislate such an action, based on possible harm to the atmosphere's ozone layer from the fluorocarbons. "We have done it to give a lead, to draw attention to the problem and because we think someone has to start drawing the line," declared one Swedish ecologist.

"Don't Drink and Swim"

◆ The Water Safety Council of New South Wales, Australia, warns that the adage "Don't drink and drive" should be expanded to include "Don't drink and swim." The Council wrote to the *Medical Journal of Australia*, pointing out that when drownings of those under 18 were eliminated, 39 percent of the remainder had "significant blood alcohol levels."

Look Close to Home

◆ In two unrelated incidents last winter, young boys lost their lives within a few feet of home and were not found until weeks later. After 20 days, a 10-year-old boy was found in a 10-foot (3-meter) snowdrift only five feet (1.5 meters) from the front door of his home in Uxbridge, Massachusetts. In another case, at Alexandria, Kentucky, a five-year-old was lost for three months until his mother saw his cap floating in their thawing backyard swimming pool. Major searches by hundreds of volunteers and police had failed in both cases.

Long Fall

◆ Within a few months of each other, two giraffes kept in zoos recently fell down and subsequently died, one in London and one in Tel Aviv. James Doherty, curator of mammals at New York's Bronx Zoo, believes that the collapses were freak accidents, not the result of some strange falling disease. He says that the heavy

animals probably tore ligaments during their accidental falls, making it impossible for them to get up again. When giraffes are lying on the ground for longer than normal sleeping periods, digestive problems can produce bloating and death.

Pampered Churches

◆ "Last year, the revenue that accrued to both Catholic and Protestant churches here [Federal Republic of Germany] amounted to some \$3 billion," writes Wolfgang Wagner, editor of the newspaper *Hannoversche Allgemeine Zeitung*. Such riches come, not from voluntary contributions, but from government taxes that are transferred to the churches each year. Even the Nazi regime maintained this practice. "The spectacle of church prosperity is peculiar," observes Wagner, "in a country where only 1 in 3 people attend religious services on Sunday, and where recruits for the clergy cannot be found. For churches, therefore, West Germany is a paradise of wealth if not sanctity."

Clearing the Air

◆ A Japanese machine-tool sales company pays workers a "non-smoking" allowance, corresponding with the number of cigarettes that they have stopped smoking. The allowance is based on regaining wasted time at the rate of five minutes per cigarette. Hence, an eight-cigarette-per-day smoker is thought to waste about 1,000 minutes per month, for which he can be repaid 10,000 to 23,000 yen (\$40-\$95) if he stops. "Not only the health condition of [company] workers," says the *Mainichi Daily News*, "but also [the company] business has improved a great deal."

◆ Workers who ruin their health smoking on the job do not deserve workman's compensation, according to a ruling by the California (U.S.A.) Worker's Compensation Board.

The Board rejected a request from a man with chronic bronchitis because he had been smoking for 28 years.

Great Sea in Distress

◆ Delegates from 17 nations recently met in Monte Carlo to draw up an antipollution treaty with regard to the Mediterranean Sea. Underwater explorer Jacques Cousteau told the delegates that fish in the sea are becoming smaller and that the pollution formerly confined mainly to coastal areas is now an off-shore problem. Said the journal *To the Point International*: "Scientists have detected that the level of mercury in fish is so high that some Adriatic fishermen carry enough of it in their bodies to poison a cat, and a permanent diet of 2.5 kg [5.5 pounds] of Mediterranean fish a week is enough to ensure

death in about 20 years." One of the main problems is that over 100 cities along the Mediterranean pour untreated sewage into the sea. Many factories have done the same with poisonous chemicals. As a result, it is said that "one Mediterranean swimmer in seven can reckon on picking up some kind of infection."

Vending Champions

◆ Japan has more vending machines per person than any other country. There is an average of one machine for every 36 persons, whereas the United States has only one for every 53. "The machines are the only residents of some highway rest stops," notes the *International Herald Tribune*. "And one automatic vendor in northern Sapporo reportedly even thanks patrons politely." However, there are some problems among Japan's 3.2 mil-

lion machines. Parents are angered over the 11,000 metal vendors that sell magazines considered pornographic by the Japanese. Any child with the right coins can obtain them.

Battered Husbands?

◆ Wife beating and child abuse are known to be common domestic problems. But few are aware that many husbands are also battered. According to the authors of the book *Wife Beating: the Silent Crisis*, several new studies and their own research indicate that one in five American husbands is attacked by his wife. The total is thought to be about 12 million, whereas about 28 million wives are battered. Few men will admit the problem except when medical attention is needed, but many call for advice anonymously.

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