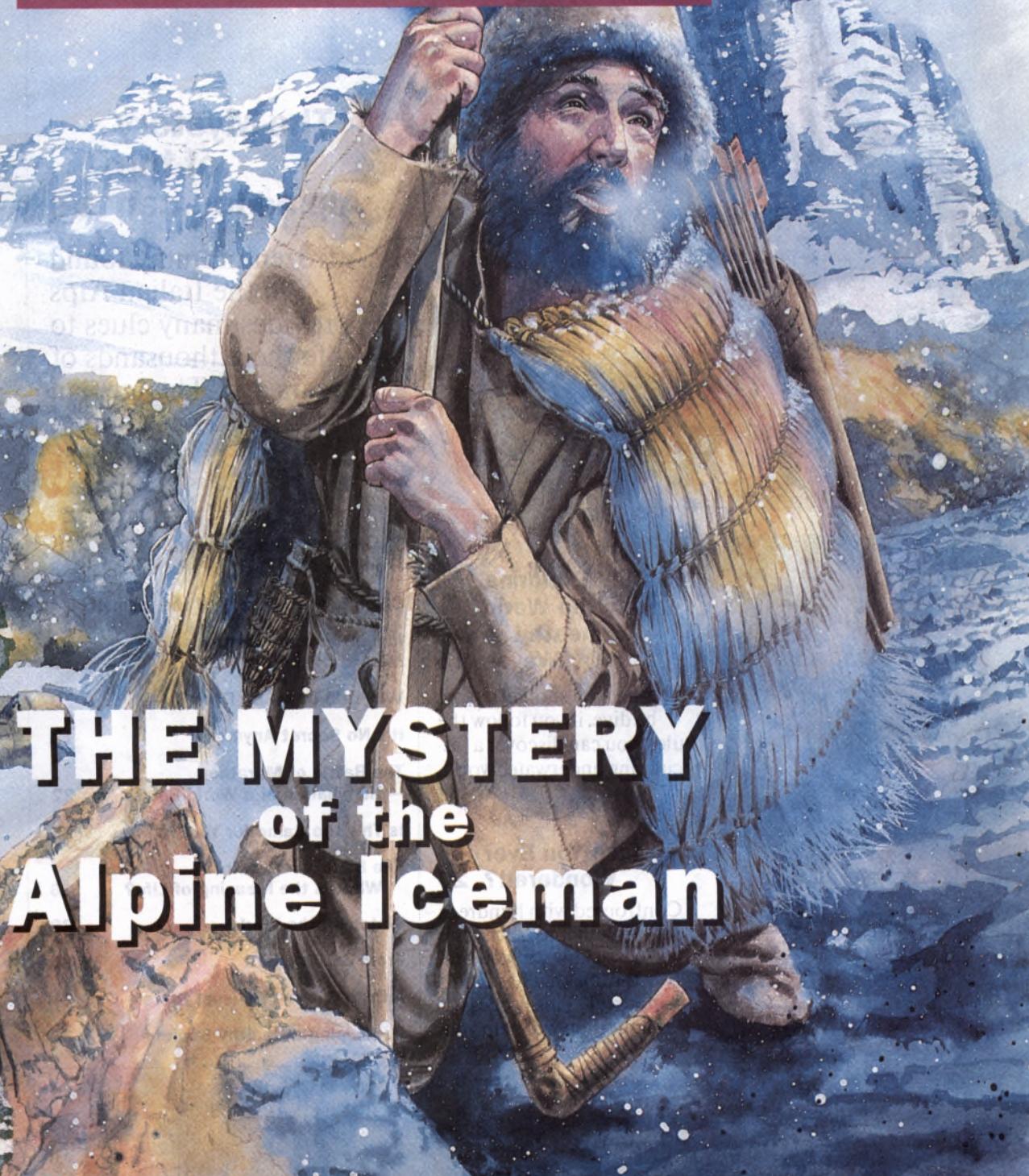


Awake!

May 8, 1995



THE MYSTERY of the Alpine Iceman

The Mystery of the Alpine Iceman 3-9

A frozen mummy found in the Italian Alps provides many clues to life there thousands of years ago. The Iceman also has an aura of mystery.



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Whether you snorkel or scuba dive, if you follow the rules, you can discover a fascinating underwater world.



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Confronted with hundreds of religions, sects, and cults, how can you find the one that has God's approval? This process of elimination will help you.

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THE MUMMY that came in from the cold

BY AWAKE! CORRESPONDENT IN ITALY

At first sight it might have seemed like the scene of a crime.

A dried-out corpse lay facedown, half trapped in the ice. An accidental death? A revenge killing? Or simply another mountain-climbing victim? In any case, what was he doing there in the silence of the Tirolean Alps 10,500 feet above sea level?

Who was he? And how did he die?

THE "Iceman," as he was immediately named, or *Homo tyrolensis*, as scientists call him, was found by chance in September 1991 by a German couple hiking on Mount Similaun (in the Ötztaler Alps), on the Austria-Italy border. The particularly hot summer that year had melted most of the snow, bringing to light remains that would otherwise have lain hidden—for who knows how long? After investigators resolved some initial uncertainty about the find, the body was crudely hacked out of the ice, suffering damage in the course of the extraction. It soon became clear, however, that it was not an ordinary corpse. Near the body lay several objects that were very different from those normally used by modern hikers who venture to such altitudes.

Some realized that the corpse was very old. After the first tests, Konrad Spindler, of Innsbruck University, Austria,



Ötzi, the Iceman

made a surprising statement—that the mummified body found on Mount Similaun was some thousands of years old! Further analysis and research on the site led scholars to conclude that the corpse they were examining was "by far the most ancient human being ever found virtually intact." (*Time*, October 26, 1992) Archaeologists believe that the Iceman, nicknamed Ötzi (from Ötztal, the German name of a nearby valley), died about 3000 B.C.E.

Once the importance of the find was appreciated, archaeologists returned several times to Mount Similaun to search for other artifacts useful in trying to understand what had happened to that man all those centuries ago. What have they discovered? Why has there been so much interest in a mummy entombed in the ice? Has it been possible to unravel any of the mystery surrounding him?

Foto: Archiv Österreichischer Alpenverein/Innsbruck, S.N.S. Pressebild GmbH

Clues to the mystery of the ICEMAN

FOR centuries, Ötzi was in a good resting-place. He lay over 10,500 feet above sea level in a narrow, snow-filled ravine in a hollow that protected him from the movements of the nearby glacier. If his body had been frozen into the glacial ice mass, it would have been completely broken up and swept away. Very likely, his sheltered position preserved him intact.

Within a few yards of the body were objects that had apparently been a part of his everyday life: an unstrung yew-wood bow, a buckskin quiver with 14 arrows (2 ready for use, the others still to be finished), a flint-bladed dagger, an ax, an object that is thought to be the frame for a primitive pack, a leather bag, a birch-bark receptacle, and fragments of clothing, as well as other utensils and objects.

When he was found, Similaun Man (another of his names) was still wearing some of his articles of clothing and had on leather footwear stuffed with straw for protection from the cold. Near his head lay a "mat" of woven straw. It was as though, overcome by tiredness and the cold one evening, the Iceman fell tranquilly asleep only to "see" the

light of day thousands of years later. The find was "a snapshot of an epoch, of a society and a biological population," says archaeologist Francesco Fedele, who defined the Similaun Man as "a time capsule."

How Was He Preserved?

Not all agree on the way Ötzi was preserved intact for so long in those conditions. "His preservation is little short of miraculous, even allowing for the alleged protection from the depression in which he was found," says *Nature*. The theory that is currently thought to be the most plausible is that preservation occurred because of a combination of "three improbable events": (1) a rapid process of natural mummification (dehydration), the result of the effects of the cold, the sun, and the foehn (a warm, dry wind); (2) a quick coverage by snow that hid the body from predators; and (3) the protection from moving glaciers afforded by the depression. Some, however, do not find even this explanation convincing, affirming that the foehn does not reach so high in this part of the Alps.

Some things about the Iceman are cer-

Awake!

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The Iceman was found just inside the Italian border on the Similaun Glacier

tain, however. It has been possible to ascertain that he was between 25 and 40 years of age, was about five feet two inches tall, and weighed about 110 pounds. He was wiry and muscular, and his brown hair was well cared for and was apparently cut regularly. Recent DNA studies of tissue samples have established that he belonged to the same gene pool as contemporary central and northern European inhabitants. His worn teeth reveal that he ate coarse bread, suggesting that he may have belonged to an ag-

icultural community, as evidenced by the grains of wheat found in his clothing. Interestingly, it has been possible to determine that he died toward the end of summer or the beginning of autumn. How? In his bag were found the remains of a variety of wild plum that ripens in late summer; perhaps, they were a part of his last supplies.

"A Medieval Cavalier Carrying a Rifle"

But what does Ötzi reveal? The Italian journal *Archeo* summarized a number of questions raised by the discovery in this way. "Was he a warrior or a hunter? Was he an isolated individual, was he traveling with his group, or again, was he in transit on those mountains in the company of a small select part of his group? . . . Was he alone, surrounded by all that ice, or can we expect other presences?" Scholars have sought to ascertain the answers mainly through examination of the objects found on Mount Similaun and attempts to decipher their meaning. Various theories as to why Ötzi found himself at an elevation of more than 10,500 feet have been suggested, but each one of them is contradicted by some other detail. Let's consider a few examples.

The bow, which had never been strung, and the arrows would immediately suggest

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that he was a hunter. Does that resolve the enigma? Perhaps, but the bow, with a length of nearly six feet, "was very big for a man of his stature," says archaeologist Christopher Bergman, and "decidedly oversized to hunt typical Alpine game." Why would he have a bow that he could not use? Furthermore, a person traveling in the mountains needs to shed all excess weight, "which makes it particularly puzzling that the man's bow and 12 of his 14 arrows were unfinished, whereas his other weapons (dagger and axe) were worn by prolonged use," observes *Nature*.

What about the ax that was found just a few yards away? At first, it was thought to be bronze, but tests revealed that, in reality, it was made of copper. For this and other reasons, many archaeologists are inclined to date Ötzi back to the beginning of the so-called Copper Age, that is, the fourth-third millennium B.C.E. "Carbon 14 tests . . . confirmed that he had lived between 4,800 and 5,500 years ago," stated the magazine *Audubon*.^{*} Other objects, however, would tend to persuade some experts to place the Iceman in a slightly older period. Apparently, it is not possible to assign Similaun Man to a particular ancient civilization. Referring to the copper ax, one archaeologist believes that Ötzi "possessed a weapon that was too technologically advanced for the epoch in which he lived. It was as though we had found a medieval cavalier carrying a rifle. In fact, in that epoch, copper was known only in Oriental cultures."

Further, as we have already seen, the ax could have been a very precious object among the Iceman's contemporaries. Other artifacts, such as the sheath for his dagger, were also extremely refined and were

* For information on the unreliability of the carbon-14 test, see *Awake!* of September 22, 1986, pages 21-6, and *Life—How Did It Get Here?—By Evolution or by Creation?*, page 96, published by the Watchtower Bible and Tract Society of New York, Inc.

evidently "objects of prestige." But if Ötzi was a high-ranking personage, a chief, why was he alone at the time of his death?

According to *Popular Science* magazine, Konrad Spindler, of the University of Innsbruck, opined: "What were originally thought to be enigmatic tattoos correspond exactly to worn knee and ankle joints and degenerating vertebrae in his spine. The Iceman's doctor probably treated the condition by branding the skin above the aching area, then rubbing herb ash into the wound."

Recently, the idea was advanced, in a meeting of forensic medical experts in Chicago, that Ötzi may have been a beaten and bloodied fugitive who died in hiding while others hunted him. It has been determined that he had several broken ribs and a fractured jaw. However, it cannot be said exactly when he suffered these injuries—before or after death. If he had been the victim of violence, though, "why did he still have all his implements, even 'precious' ones?" such as the copper ax, asks *Archeo*.

The investigators reckon that the facts available are not sufficient to complete the picture, and many questions still remain unanswered. But it is clear that the civilization Ötzi belonged to was highly structured and complex.

Ötzi and His World

In describing Similaun Man's world, scholars base their opinions on finds from Alpine sites that are thought to have been inhabited by his contemporaries. Even then, archaeologists tell us, some areas were more developed than others, and most technical innovations, such as working in copper, originated in the Middle East.

According to one reconstruction, Ötzi may have lived in one of the agricultural villages of the Adige River basin. This river was an important trade route connecting



Foto: Prof. Dr. Gernot Patzelt/Innsbruck

X marks the spot where Ötzi was found. Insets:

1. Copper ax,
2. Flint dagger,
3. Possibly an amulet,
4. Antler point in wood handle

Fotos 1-4: Archiv Österreichischer Alpenverein/Innsbruck, S.N.S. Pressebild GmbH

the Italic Peninsula with Central Europe. A number of settlements have been found in various places in that part of the Alps, even at an altitude of some 6,500 feet. Agricultural villages of the period were typically made up of three or four houses, perhaps a few dozen at most. What kind of houses? Excavations have brought to light only the floors, almost always of beaten earth. The dwellings had a single room, generally with a hearth in the center and sometimes an oven. The roof may have been gabled, similar to contemporary dwellings built on piles that were found close to a number of Alpine lakes. Every single-room hut probably accommodated one family unit.

What kind of contacts were there between such communities of livestock raisers and farmers? Undoubtedly, trade. For example, the ax found on Mount Similaun was similar to those manufactured farther south, on the shores of Lake Garda, and may have been the object of a commercial transaction. Also among Ötzi's equipment were some flints, objects precious in trade along the Adige Valley route. One of the activities that necessitated larger-scale movements was the seasonal migration of livestock. As they still do in the Tirol today, shepherds led their flocks over Alpine passes in search of fresh pastures. What other conclusions have been reached on the Iceman's origin?

Insight into the ICEMAN'S mind and world

LET's go back to Ötzi. Was he primitive, stupid, and devoid of aesthetic sensibilities? What do his utensils, his weapons, and his clothes reveal?

His weapons reveal that Ötzi had an excellent knowledge of ballistics. The two finished arrows had the characteristic feathers at the butt. The feathers were glued at an angle to make the arrow spin in flight, permitting a fair degree of accuracy up to a range of some 30 yards. His leather clothes (various animal skins) tell us something of the tastes of the period. Today, a garment needs not only to cover but also to satisfy certain aesthetic requirements. What about in Ötzi's day? Describing the finds, *Time* magazine says: "The robe had been cleverly whipstitched together with threads of

sinew or plant fiber, in what appears to be a mosaic-like pattern." Both the pieces and the deliberate manner in which they had been sewn contributed to creating a "patchwork effect," says the book *Der Mann im Eis* (The Man in the Ice). Over the tunic, the Iceman wore "a woven grass cloak, ideal for protection from the cold, which during a break could have been used as a 'mattress' to isolate his body from the ground."—Focus.

"An unexpected degree of sophistication" in his equipment was also noted, comments *Time*. The dagger, for example, was complete with "a finely crafted sheath, made from woven vegetation." The Iceman, then, apparently lived in an epoch that was truly "rich and culturally intense," as Giovanni

Forensic experts examine the Iceman's body in Innsbruck

Foto: Archiv Österreichischer Alpenverein/Innsbruck, S.N.S. Pressebild GmbH



Maria Pace defines it in his book *Gli italiani dell'Età della pietra* (Italians of the Stone Age).

Mention could also be made of the mushrooms found near Ötzi. They may have served to start a fire, but more likely, say experts, the Iceman had them with him for their antibiotic and therapeutic properties, part of a kind of portable "first-aid kit."

Aesthetic taste, intellectual capacity, therapeutic knowledge, and know-how in the fields of metalworking, agriculture, and art—these indicate, in contrast with the image often presented, that contemporaries of the Iceman were knowledgeable and competent in diverse fields. British archaeologist Dr. Lawrence Barfield stated: "Few of us today have any of the skills which most people would have had during the fourth millennium [B.C.E.]." Their refined tastes emerge, for example, in artistic depictions and metal and ceramic artifacts recovered from tombs.

The Religious Climate

"As far as scholars have discovered, there has never existed any people, anywhere, at any time, who were not in some sense religious," says *The New Encyclopædia Britannica*. Speaking of the prominent role that religion played in ancient times, the *Dizionario delle religioni* (Dictionary of Religions) says that "compared to those used in everyday life, a disproportionate amount of goods and energies were employed in religious projects."

The religious sentiment of Ötzi's time was evidently very prevalent. In many places, ancient burial sites have been found that attest to the variety and richness of funeral rituals. Dozens of clay figurines have also been found that depict divinities belonging to ancient pantheons.

Ancient Human History and the Bible

The civilizations that emerge from research into ancient times, then, were quite

complex. The picture is not one of primitive civilizations struggling, among a thousand difficulties, to make almost imperceptible progress toward a fully formed society. As far as historians are concerned, communities were of varying sizes but fully formed.

This is meaningful for any who study the Bible. The book of Genesis indicates that very early in human history—and particularly as humankind 'scattered over all the surface of the earth'—complex and fully formed civilizations appeared, the elements of which had intellectual and spiritual capacities.—Genesis 11:8, 9.

The Bible testifies that technical and artistic abilities were possessed by mankind even in the very earliest times, such as the forging "of every sort of tool of copper and iron." (Genesis 4:20-22) According to the Bible record, human beings have always had the conscious desire to worship some deity. (Genesis 4:3, 4; 5:21-24; 6:8, 9; 8:20; Hebrews 11:27) Even though his religiosity degraded with the passing of time, man remains "incurably religious," says *The New Encyclopædia Britannica*.

The Search for Origins

Although archaeological research is not able to answer all the questions posed by the discovery of Ötzi, it has nonetheless enabled us to gain some insight into the world in which he lived—a complex world, very different from the usual image of so-called prehistoric times. It was much more modern than many believe.

In conclusion, apart from the facts deduced from the Iceman's appearance and belongings, as *National Geographic* stated, "almost everything else about him is part mystery, part speculation." Meanwhile, Ötzi lies in a cold chamber in Innsbruck, Austria, while over 140 authorities in various disciplines struggle to resolve further mysteries of the Iceman who came in from the cold.

WHY DRILL DOWN SO DEEP?

By Awake! correspondent in Germany



KTB-Neuber

Above: Measuring cores taken from the drill

Left: Model of the earth's crust

DID you know that just over five and a half miles from your home, the temperature is a sizzling 570 degrees Fahrenheit? But don't worry, the heat is far below you, at a depth of 30,000 feet! And to make sure that your feet don't get scorched, you are safeguarded by a protective shield called the earth's crust.

This crust is the center of attraction at the Continental Deep Drilling Program, locat-

ed near Windischeschenbach, a German village not far from the border of Czechia. The purpose of this program was to drill a hole over six miles deep to investigate that protective shield. However, the drilling had to stop at 5.6 miles because of the heat, as we shall see. But why go to the trouble of digging such a deep hole?

Deep drilling is not new. The Chinese reportedly bored to a depth of over 500 yards in 600 B.C.E. in search of brine. Since the In-

dustrial Revolution, the voracious appetite for raw materials in the West has meant that drilling technology has progressed rapidly. Recently, however, drilling has been motivated by something more pressing than commercial interest: Human life is at stake. How so? And how can drilling into the earth be of help?

Why Is Deep Drilling Important?

First, some of earth's mineral resources are being consumed so quickly that they may be exhausted. Can these same minerals be found farther down in the earth, perhaps still in their developing stages? That is a question that deep drilling may answer.

Second, as the world's population increases, earthquakes take an ever-rising toll. About half the world's citizens live in areas threatened by earthquakes. That includes residents of more than a third of the largest cities on earth. What do earthquakes have to do with drilling? "Study of the lithosphere [the earth's outer shell] ought to make forecasting more accurate," reports the booklet *Das Loch* (The Hole). Yes, man has every reason to try to learn earth's secrets.

The cost of deep drilling is high, though. The price tag for the German project is \$350 million. Aren't there other ways of unearthing our planet's secrets? Yes and no. Science deduces much about the makeup of the earth by using instruments located on the surface. But a superdeep borehole is the only way to verify such deductions and to examine rocks that have remained until now under extremes of pressure and temperature. You could say that deep drilling tries to get to the bottom of things.

So much for drilling generally. Why don't we visit the site at Windischeschenbach? Afraid of scientific terminology? No need. The guide, a geologist, has promised to keep everything simple.

An Amazing Drilling Rig

We are amazed to see the drilling rig towering over the borehole to the height of a 20-story building. The rig is one of the features that give this project special appeal even to the nonexpert. And there is more to come.

Take, for instance, the location. When planning the superdeep hole, scientists didn't choose to drill just anywhere. The newspaper *Die Zeit* wrote about the project: "If you want to find out how earthquakes occur, concentrate on those places where [underground] plates bump together or drift apart." Windischeschenbach is such a place, as it lies directly above the borderline of two subterranean continental plates or slow-moving sections of the earth's crust.

It is thought that in the past, these two plates came together with such force that they thrust portions of the lower crust upward toward the surface, to within reach of modern technology. Drilling through different formations of rock produces what our guide calls a geological shish kebab. How deep is the hole?

On October 12, 1994, a flashing sign on the information building heralded the maximum depth: "9,101 meters" (29,859 feet). How deep is that? Well, if there were an elevator to transport us to the bottom, the descent would take almost one and a half hours. It would, however, be a journey we would never forget. Why? Because as we went down, we would feel the temperature rising between 14 and 17 degrees Fahrenheit every thousand feet. So at the present depth, we would encounter a torrid 570 degrees Fahrenheit. How glad we are that our visit does not include an excursion to the bottom! But the question of temperature brings us to another interesting aspect of this project.

At about 5.6 miles, the borehole crosses the critical 570-degree-Fahrenheit

threshold. Why critical? Because when rocks are subjected to such heat and pressure, they change from being rigid to being flexible. This change has never been examined in a natural environment.

Also noteworthy is the system that navigates the drill. To scale the operation down, picture yourself holding the end of a rod about a hundred yards long and 0.0788 inch in diameter, the width of a thick sewing needle. Now imagine trying to steer a miniature drill at the other end. In no time at all, you would have a crooked hole, broken pieces, or both.

Equipment was developed to keep the hole vertical by automatically correcting the course taken by the drill. This navigation system proved so successful that at over 6,000 yards, the bottom of the hole deviates only 26 feet from perpendicular. Quite an achievement, boring what our guide tells us is "presumably the straightest hole in the world"!

A Round-Trip to Change the Drill Bit

The motor that drives the drill is located "down hole," not at the surface. Consequently, the whole length of drill pipe does not rotate when drilling. Nevertheless, drilling at such depths is a tiresome process. Toiling downward at one or two yards per hour, each bit labors through about 150 feet of rock before being replaced. As our guide leads us closer to the rig, we observe the drill pipe being hoisted out of the hole for just that purpose, to change the bit.

Huge robot hands grasp and disconnect each 130-foot section of pipe. The pipe-handling system constitutes another fascinating feature of the project. The system was newly designed to speed up the tedious process of raising and lowering the pipe, or making a round-trip, as drilling experts describe it. There is no shortcut. A beaming face peers from beneath a yellow helmet and

explains: "To change the bit, we have to pull everything out!"

What Can We Learn From the Samples?

We inspect the laboratory and are staggered to see row upon row of shelves filled with samples of rock. How are the samples extracted from the earth? In two different ways.

One means is by coring, whereby cylinders of rock are retrieved. No time is lost in observing the behavior of these cores in the laboratory. Why the hurry? Because in the crust, rock is under intense pressure. Geophysicists deduce much about this pressure by noting how each core "unwinds" during its first few days above ground.

The more common method of retrieving samples is during normal drilling. Fluid is pumped down the drill pipe to cool the bit and flush out cuttings. Pressure forces the fluid and the cuttings to the surface to be separated by a filter. The fluid is reused, and the cuttings are analyzed. What do these analyses reveal?

Tests identify the type of rock and determine its electrical and magnetic properties. Data is gathered on the location of ore deposits. The density of the rock indicates how quickly a quake travels through the earth.

Tests also reveal a constant movement of water in both directions between the surface and depths of 13,000 feet and beyond. "This throws completely new light upon the problems of disposal of harmful substances in mines and shafts," comments the science magazine *Naturwissenschaftliche Rundschau* (Natural Science Review).

Our tour concludes with a hearty farewell to our guide. His unpretentious description of the project had the hallmark of an expert for whom the outstanding has become routine. To scientists, Windischeschenbach may seem down-to-earth, but for us, our visit was something quite special.

IT'S NO SECRET ANYMORE

*every body
ring that keeps
this ware goes if I only was at home
first man down if he asked you to
like dogs many a dog is kept
if I only had my money for the
away we are kept worse ever
get a chance to run away we
tell you where we are at press
Stopford on the 20th of this mon
along the rail road to guard
night there and it rained and
letter to stand under*



"Pleas keep this secret read it to no stranger"

WITHOUT the niceties of modern spelling and punctuation, in 1863, during the American Civil War, William H. Morey wrote this introductory warning from Acquia Creek, Virginia, to his young wife, Elisa Ann, in Pennsylvania. He was 24 years old, recently married, and an enlisted soldier from Hanover Township, Pennsylvania. He was fighting on the side of the North, the Union. His enemies? Other Americans who supported the Confederacy of southern states that had seceded from the Union, alleging Federal (northern) interference from Washington, D.C., in their economic affairs. What did Morey want kept secret? We will soon see, but first some background information.

The American Civil War erupted in 1861 after seven southern states broke away from the Union, soon to be followed by four more. These 11 formed the Confederacy. The continuance of slavery was one of the principal issues between the North and the South. It was argued by the wealthy southern planters that the North could afford to abolish slavery, since its economy was sustained by thousands of European immigrants. The southern economy, however, based on cotton, needed its nearly four million slaves in order to prosper. At least, that is what they believed.

What did President Abraham Lincoln believe? He wrote in August 1862: "My

paramount object in this struggle is to save the Union, and is not either to save or destroy slavery. If I could save the Union without freeing *any* slaves, I would do it; and if I could save it by freeing *all* the slaves, I would do it." Shortly after this, on January 1, 1863, Lincoln announced freedom for all slaves under rebel control. This struck a tremendous economic blow to the southern slave owners, who, as they viewed it, lost "several billion dollars' worth of slave property" without any compensation.

That dreadful civil war cost the lives of at least 618,000 young Americans during the years 1861-65, in addition to many more wounded—more American casualties than in any other war. William Morey found himself embroiled in this conflict when he wrote his diary and his secret letter on January 25, 1863. As a common soldier, what were his secret conclusions about the war?

An Embittered Letter

He opens his letter by thanking his wife for "that tobacco and other things" that she had sent him and then writes: "I believe and see that this ware [war] is a hole humbug and a money making war everybody tries to make the moste money and that is the only thing that keeps this war a going and now we see how this ware goes if I only was at home again I would knock the first man down if he asked me to enlist again we are kept here like dogs many a dog is kept better than we are and I tell [you] if I only had my money for these 4 months I would try and run away we are kep worser every day."^{*}

He explained where they were stationed: "It is a very nice place and a very nice view you can se the boats come on the potomac [river] . . . here we are working some days verry hard loading the [rail] cars and only half enough to eat a great many of our boys

* Poor spelling and lack of punctuation are according to the original letter.

talk of runing away if they only had there money . . . we are only marching and doing hard duty all the time."

Even so, these privations were as nothing compared to those suffered by the men in combat. In one battle, southern general D. H. Hill lost 2,000 of his 6,500 men. He wrote: "It was not war, it was murder." (*Gray Fox*, by Burke Davis) The conditions of conscription in the North and the South were such that those with money could get an exemption or buy their way out of military service. Some poorer ones in the South complained that it was a "rich man's war and a poor man's fight." Corporal Morey was paid a bounty to serve in the war, and with the proceeds he set up a bakery.

Those who ended up in prison camps, such as Andersonville, Georgia, were often subjected to dreadful conditions. "A sluggish stream ran through it. The disease and death rates were enormously high, with poor sanitation, crowding, exposure, and inadequate diet contributing to the unhealthful conditions." (*Andersonville*, a brochure) Even worse was the murderous, plundering treatment meted out by gangs of petty criminals, called Raiders, who were also prisoners. They promoted an "orgy of plunder and violence." From one cause or another, at least 12,920 soldiers died at Andersonville.

In 1995, is mankind any further ahead? Have the lessons of history been learned? The terrible massacres in Rwanda, Liberia, the Balkans and many other places of conflict are recent examples of man's inhumanity to man. Catholic and Orthodox believers, while claiming to be Christian, have failed to live up to the loving example of Christ Jesus. Only Jehovah's Witnesses have maintained their neutrality and refused to learn or practice war anymore. And that is no secret.—Isaiah 2:4; Micah 4:3.

SAFELY EXPLORING THE WORLD BENEATH THE WAVES

By Awake! correspondent in Australia



THREE is a fascinating world that comparatively few people have seen firsthand. It lies just below the surface of the sea. It is the world beneath the waves, ready for you to explore. ‘How safe is such a trip?’ you may ask. ‘Do I need to be a strong swimmer before I can visit this fascinating underwater world? And am I excluded if I cannot swim at all?’

Two Modes of Exploration

Two basic methods of exploring the underwater world are popular—snorkeling and scuba diving.*

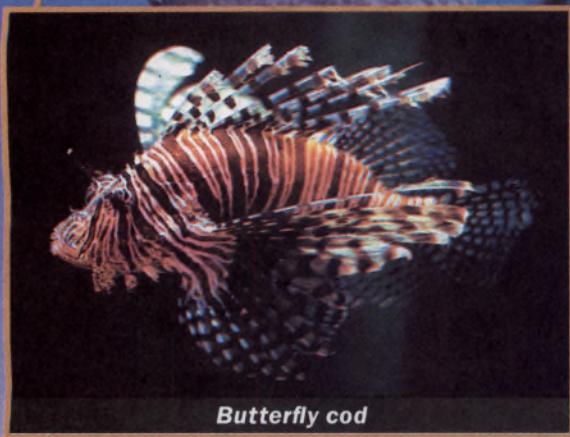
A snorkel is a device consisting of a bent tube that fits into the swimmer’s mouth and projects above the water when he swims facedown on the surface of the water with his face submerged. It enables the swimmer to breathe without lifting his head out of the water for air. A mask protects his eyes.

Scuba, on the other hand, refers to equipment consisting of a cylinder or cylinders containing compressed air attached to a breathing apparatus. So scuba diving is obviously for those interested in going well below the surface, is much more complicated, and can be quite expensive.

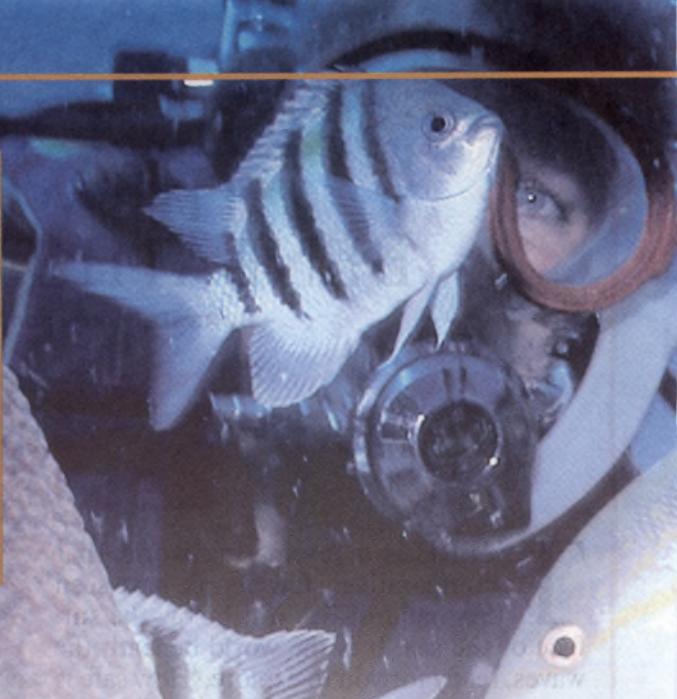
* “Scuba” is an acronym derived from the initial letters of “self-contained underwater breathing apparatus.” The current international flag to warn of the presence of scuba divers is the white-blue alpha flag. Some countries still use the red flag with a white stripe, as shown above.

By courtesy of Australian International Public Affairs





Butterfly cod



The simpler and far less expensive recreation of snorkeling will enable you to see the exquisite delights of the underwater world even from the surface. This is how one enthusiastic snorkeler describes his first experience: "I still remember vividly the first time I snorkeled through a massive school of thousands of little fish, when I was a lad of just 14. The fish seemed to form a living tunnel for me as I glided through. Their silvery bodies caught the sun, creating a beautiful effect. I was in ecstasy. And so began a lifelong love affair with snorkeling."

But Is It Really Safe?

An enthusiast who has safely enjoyed snorkeling for more than 20 years suggests that the most dangerous thing about it is the drive down to the beach! When in the water, safety depends more on the person than on the activity. If you are not a competent swimmer, you should not venture beyond calm, shallow water, and *you should never go beyond your depth*. In fact, there can be much to see in just four feet of water. As you gain skill and confidence, you will be able to go safely

into deeper water, but even then you should always have a capable companion with you. Most experienced divers make it a rule never to venture far from shore or into deep water alone. And apart from the safety factor, it is more relaxing and enjoyable to share the experience of snorkeling with a companion.

It is true that breathing through a snorkel with your face underwater may take a little getting used to, but if you persevere, you will find that it is not really difficult. Some beginners practice in a swimming pool or in the shallows at the seaside where there are no waves. Some even practice in a bathtub.

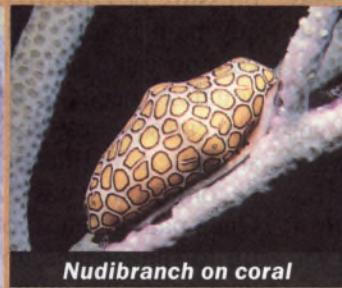
Equipment You Will Need

The equipment needed for snorkeling is relatively simple and is not expensive: a face mask, two diving fins (flippers), and the snorkel itself. Of course, if you plan to snorkel in the wintertime or in water too cold for normal swimming, you will probably require a wet suit, and this will increase expenses considerably. Let's consider just the three basic items needed to begin.

The mask should fit well, be watertight,



Flamingo tongue



Nudibranch on coral



Blue tang

and feel comfortable. It must also have an equalizer, that is, a series of recesses allowing you to pinch your nose from outside the mask. The reason for this will be explained later. The mask should have a good field of vision, and it should be of low volume, meaning that the glass should be close to your face, minimizing the volume of air inside. The most comfortable masks are made of silicone. It is even possible nowadays to get visually corrected face masks for those who are nearsighted.

Next come the fins, one for each foot. They are usually made of rubber and are paddle-like devices worn on the feet to give speed in swimming. There are two kinds to choose from: the full-foot type and the open-heel design. If you need footwear because of walking across barnacle-covered rocks or shallow coral beds before reaching deeper water, then you will need the open-heel variety. This enables you simply to slip your flippers on over your footwear and begin snorkeling. The full-foot fin fits directly onto your foot and can be used if no other footwear is required in addition to the flipper.

Finally, the snorkel itself. A simple J-shaped snorkel is best, especially for the beginner, since the most important feature is ease of breathing. One manual on diving suggests that the most acceptable type should have a bore of at least 3/4-inch diameter and be 12 to 14 inches long.

Helpful Hints for Using a Snorkel

As already explained, the snorkel allows you to breathe while swimming on the surface of the water without raising your head. What about diving below the surface? This is also possible, but first you will need to take a good, deep breath. Of course, water will get into the snorkel once it goes beneath the surface. Maybe you have seen that when a diver rises to the surface, a spout of water often shoots up from his snorkel. This is called the blast method of clearing out the water. It is actually quite easy to learn but requires a sharp puff of air, so you must surface with sufficient air still in your lungs if you are to clear the snorkel successfully.

Some consider the displacement method better, but it takes a little more practice. How

does this method work? As you approach the surface after your dive, look straight up. The tip of your snorkel should now be pointing slightly downward. With your head in this position, it will only take a small puff of air to displace the water that has filled your snorkel. Keep your head in this position until your face is about to break surface. At that moment, swing your face down and breathe out. The cleared snorkel will remain clear, and you will find you can breathe effortlessly.

Do not be alarmed if you occasionally get water in the snorkel from a passing wave even while you are still on the surface. If this should happen, simply give a firm blast of air, and the snorkel will be cleared of all water.

Enjoy Your Snorkeling

While on the surface, try to learn to breathe steadily—in deeply, then out firmly. Your lungs will feel the benefit of this. Remember that the secret of enjoyable snorkeling is, not how far or fast you swim, but how much you see and explore as you go along. When you do wish to dive below the surface, learn to relax and conserve as much oxygen as possible, for then you will be able to stay down longer. But do not try to set any records of endurance!

As you glide along, let your arms drift lazily by your side. Use your flippers only, with long, steady strokes, keeping your knees slightly bent. At first, it will take concentration to do this effortlessly and smoothly, but after a short time, it will become automatic. But what should you do if your mask keeps fogging up? A simple way to prevent this is to rub a little saliva on the glass before putting the mask on. Just rinse the saliva off after a moment or two, and you will find that the glass will stay clear for quite a long time.

Sometimes you may feel pain in your middle ear during a dive. This is called middle-

ear squeeze. It is caused by a pressure differential across your eardrums. Usually, it begins after you have descended three to six feet. Do not ignore this pain and continue to descend, hoping that it will improve. It will get worse the deeper you go, and you could even burst an eardrum. The divers' journal *Padi Diver Manual* recommends that pressure be equalized every few feet before any pain is felt. This is done by pinching your nose and gently blowing. This is why an equalizer needs to be on the mask, so that you can squeeze your nose while the mask is still fitted. With experience, this procedure becomes quite easy, almost second nature. Once pain is felt, though, it is best to come up to the surface, for after discomfort begins, continued efforts to equalize will be ineffective.

As a form of recreation, snorkeling is wholesome, educational, and exhilarating. For practically all age groups, it is an excellent way to combine exercise, fresh air, and sunshine. Just learning to recognize and identify the names of even a small number of the underwater sea creatures makes snorkeling a challenge for those so inclined. Nevertheless, for most, like Tony, just back from snorkeling in Fiji, the sheer delight of "being in another world of breathtaking colors" is what it is all about. His friend Lena agrees: "I was so excited by the beauty that surrounded me that I forgot where I was!"

What About Scuba Diving?

For those who are good swimmers and are enticed by the wonders of deeper water or who perhaps want to try underwater photography, scuba diving is the next step. If you keep in good health, take good care of your equipment, and follow basic rules, you may enter the water with confidence. However, you should never go scuba diving without first having taken a proper course and, if required, having obtained a license through a

reputable instructor. Even then, you should not exceed the depth limits that your license permits. And always dive with a companion. In some countries, such as Australia, the law requires that you pass a diving-oriented medical examination before beginning such a course.

Scuba equipment can be quite expensive. In addition to the basic equipment used for snorkeling—face mask, fins, and snorkel—you will almost certainly need a wet suit, except perhaps in warm, tropical waters. You will also need a buoyancy-control device, a weight belt, a knife, a breathing apparatus (with a spare for your companion should he get into difficulties with his air supply), and a scuba tank. You also must have essential instruments, such as a diving watch, a depth gage, and a submersible pressure gage for your tank so that you know how much air you have. In many popular diving spots, this equipment can readily be rented, which often proves more economical than purchasing your own if you do not dive frequently.

Respect for the Ocean and Its Creatures

"I was snorkeling on a reef near Caloundra on the Queensland Sunshine Coast, watching a colorful butterfly fish from about six feet away," recounts snorkel-enthusiast Peter. "Then, suddenly, a shiny steel shaft shot into view and stopped with a violent thud. The little fish struggled in vain—it was impaled through the gills against a rock. The lad responsible admitted that he had killed the pretty fish just for target practice! It was too small to eat." Unfortunately, such thoughtless acts are increasing throughout the world.

Pollution too has left its mark. Popular spots often end up as little more than rubbish dumps, littered with plastic bags and used drink cans. Even destructive chemical effluent is becoming an increasing problem

in some lands. As the junk and rubbish increase, the fish move elsewhere, and the coral dies.

It is a good habit always to wear gloves when scuba diving. Even then, it pays to be cautious as to what you touch. For example, the ever-present sea urchin sports needlelike spines able to penetrate unprotected hands. And the glamorous butterfly cod, though small, seems to be warning, 'Not too close. This is my territory!' as it proudly flaunts its vivid red and white stripes. Deceptively nestled among its frills are long spines covered with venomous mucus. Just brushing against them can be painful.

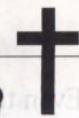
Other creatures defy the eyes. The weedy sea dragon, for example, is a genius at camouflage. It looks just like a piece of vegetation, challenging any diver's keenness of eye. In contrast, the exquisite, vivid colors of the nudibranch, a sea slug, simply grab your attention. But is this a tempting morsel? Would-be predators soon learn differently, for it is armed with some nasty chemicals.

Many Rewarding Sights

For snorkeler and scuba diver alike, the ocean is indeed rich with life. Coral reefs are a panorama of countless creatures and colors no more than a few slow strokes of one's fins away. "The exhilaration of being surrounded by colorful fish of all shapes and sizes, some feeding out of your hand, is hard to equal. It is a very moving experience," said one diver. Then he added: "To be there as one of them, while suspended almost impervious to gravity, is quite unreal."

Therefore, if you ever get a chance to go snorkeling or scuba diving, remember that it can be done quite safely if you take the simple precautions recommended by experienced divers. Perhaps one day you too may enjoy this enriching experience of exploring the beauty of the world beneath the waves.





HAVE YOU EVER WONDERED?

WITH hundreds of religions, sects, and cults in the world today, how can you possibly identify the religion approved by God? It might seem like looking for a needle in a haystack. But do you need to check the haystack straw by straw? No. You can use a process of elimination. God's Word, the Bible, acts as the magnet that helps you to identify that "one faith."—Ephesians 4:5.

In a previous issue of this magazine, under "Have You Ever Wondered?" (January 8, 1994, page 13), we covered the question of the immortal soul. By the use of Biblical reasoning, we proved that man does not have an immortal soul that is blessed or that suffers after death. (Ecclesiastes 9:5, 10; Ezekiel 18:4) With that simple truth, we can eliminate any religion that teaches that man has an immortal soul. That leaves very few religions in our search for the one approved by God. So let us apply some more questions that can help us to reduce the list even further, simply by looking up and reasoning on the Scripture texts cited below.

1. Would true worship exalt, glorify, and unduly honor human religious leaders, even assigning them unscriptural titles?—Psalm 96:5-7; Matthew 23:6-12; 1 Corinthians 3:5-9.
2. Should the true religion be a profit-oriented enterprise, so that its leaders can live in luxury?—Matthew 6:19-21; James 2:1-4; 5:1-3.
3. Should the true religion be identified by a single teaching (such as Baptist, Pentecostal), by its geographic origins (such as Roman, Southern, Church of England), by its imperfect founder (Luther, Calvin, Wesley) or by the form of rule it employs (such as Presbyterian, Episcopal, Congregational)?—Isaiah 43:10, 12; Acts 11:26.
4. Would true worship try to hide or replace God's revealed name?—Isaiah 12:4, 5; Matthew 6:9; John 17:26.
5. (a) How should the true religion view the Bible? (Psalm 119:105; Luke 24:44, 45; Romans 15:4; 2 Timothy 3:14-16) (b) How should it view so-called post-Biblical revelations?—Galatians 1:8, 9.
6. To what and to whom do true worshipers direct attention for salvation?—Psalm 27:1; Matthew 6:33; Romans 16:25-27; 1 Corinthians 15:27, 28; Revelation 11:15.
7. What kind of conduct should the true religion produce as a result of its teachings?—Matthew 22:37-40; Ephesians 4:23-29; compare Galatians 5:19-21 with 5:22, 23.
8. Would the worldwide brotherhood of true worshipers of God be involved in divisive politics and nationalism?—Daniel 2:44; 7:14; John 18:36; Romans 16:17; 1 Corinthians 1:10.
9. Would the worship approved by God permit participation in wars and racial or tribal killings?—Exodus 20:13; Isaiah 2:2-4; John 13:34, 35.
10. Who today worldwide show true Christian love? Are not divided by politics, race, or nationalism? Do not glorify human leaders? Do not exploit people for wealth and position? Do not participate in wars? Have a Biblical name? Advocate God's Kingdom rule as the permanent solution to mankind's problems?—Isaiah 43:10, 12.

Have You Ever Wondered? The Bible's Answers

The following are some of the texts cited with the questions on page 20:

1. "They like the most prominent place at evening meals and the front seats in the synagogues, and the greetings in the marketplaces and to be called Rabbi by men. But you, do not you be called Rabbi, for one is your teacher, whereas all you are brothers. Moreover, do not call anyone your father on earth, for one is your Father, the heavenly One. Neither be called 'leaders,' for your Leader is one, the Christ. But the greatest one among you must be your minister. Whoever exalts himself will be humbled, and whoever humbles himself will be exalted."—Matthew 23:6-12.

2. "Stop storing up for yourselves treasures upon the earth, where moth and rust consume, and where thieves break in and steal. Rather, store up for yourselves treasures in heaven, where neither moth nor rust consumes, and where thieves do not break in and steal. For where your treasure is, there your heart will be also." (Matthew 6:19-21) "Come, now, you rich men, weep, howling over your miseries that are coming upon you. Your riches have rotted, and your outer garments have become moth-eaten. Your gold and silver are rusted away, and their rust will be as a witness against you and will eat your fleshly parts."—James 5:1-3.

3. "'You are my witnesses,' is the utterance of Jehovah, 'even my servant whom I have chosen, in order that you may know and have faith in me, and that you may understand that I am the same One.'" (Isaiah 43:10) "It was first in Antioch that the disciples were by divine providence called Christians."—Acts 11:26.

4. "Give thanks to Jehovah, you people! Call upon his name. Make known among the peoples his dealings. Make mention that his name is put on high. . . . This is made known in all the earth." (Isaiah 12:4, 5) "Our Father in the heavens, let your name be sanctified."—Matthew 6:9.

5. (a) "From infancy you have known the holy writings, which are able to make you wise for salvation through the faith in connection with

Christ Jesus. All Scripture is inspired of God and beneficial for teaching, for reproofing, for setting things straight, for disciplining in righteousness." (2 Timothy 3:15, 16) (b) "Even if we or an angel out of heaven were to declare to you as good news something beyond what we declared to you as good news, let him be accursed."—Galatians 1:8.

6. "Keep on, then, seeking first the kingdom and his righteousness, and all these other things will be added to you." (Matthew 6:33) "The kingdom of the world did become the kingdom of our Lord and of his Christ, and he will rule as king forever and ever."—Revelation 11:15.

7. "'You must love Jehovah your God with your whole heart and with your whole soul and with your whole mind.' This is the greatest and first commandment. . . . 'You must love your neighbor as yourself.' On these two commandments the whole Law hangs, and the Prophets." (Matthew 22:37-40) "The fruitage of the spirit is love, joy, peace, long-suffering, kindness, goodness, faith, mildness, self-control. Against such things there is no law."—Galatians 5:22, 23.

8. "Jesus answered: 'My kingdom is no part of this world. If my kingdom were part of this world, my attendants would have fought that I should not be delivered up to the Jews. But, as it is, my kingdom is not from this source.'"—John 18:36.

9. "You must not murder." (Exodus 20:13) "I am giving you a new commandment, that you love one another; just as I have loved you, that you also love one another. By this all will know that you are my disciples, if you have love among yourselves."—John 13:34, 35.

10. "'You are my witnesses,' is the utterance of Jehovah, 'even my servant whom I have chosen, in order that you may know and have faith in me, and that you may understand that I am the same One. . . . So you are my witnesses,' is the utterance of Jehovah, 'and I am God.'"—Isaiah 43:10, 12.

THE BATTLE OF MARATHON

Humiliation of a World Power

BY AWAKE! CORRESPONDENT IN GREECE

AS THE modern visitor descends the foothills around the Plain of Marathon, 25 miles northeast of Athens, Greece, he feels immediately overtaken by the peace and unbroken serenity of the place. One can hardly imagine that this site served as the stage for one of the most famous battles of history, a battle that successfully held back the advance of the Mesopotamian world power into Europe itself. *The World Book Encyclopedia* calls it "one of the most important battles in the history of Western civilization." And historian Will Durant describes it as "one of the most incredible victories of history."

A World Power Challenged

The Bible prophecies of the book of Daniel portray in a very vivid way the domination, expansion, and succession of world powers. Speaking symbolically but very fittingly concerning the world power of Medo-Persia, Daniel wrote: "See there! another beast, a second one, it being like a bear.... This is what they were saying to it, 'Get up, eat much flesh.'"—Daniel 7:5.

This proved to be true. During the peak of Medo-Persian power, about the second half of the sixth century B.C.E., its seemingly invincible armies under the leadership of Cyrus and Darius I swept westward across Lydia. Both Thrace and Macedonia, located in the north of Greece, were forcibly subdued. This meant that almost half the Greek-speaking world had already fallen into Persian hands, for with the capture of Lydia, the Persians also took possession of the Greek cities of the Ionian Coast that had been within the Lydian sphere of influence.

To the cry for help emanating from beleaguered Greek Ionian cities, only the city-states of Athens and Eretria responded. This did not prevent Persia's disciplined forces from sweeping in and pounding the revolting Ionians into submission. What was more, Darius decided that he would have to punish the Greek city-states for helping the Ionian rebels.

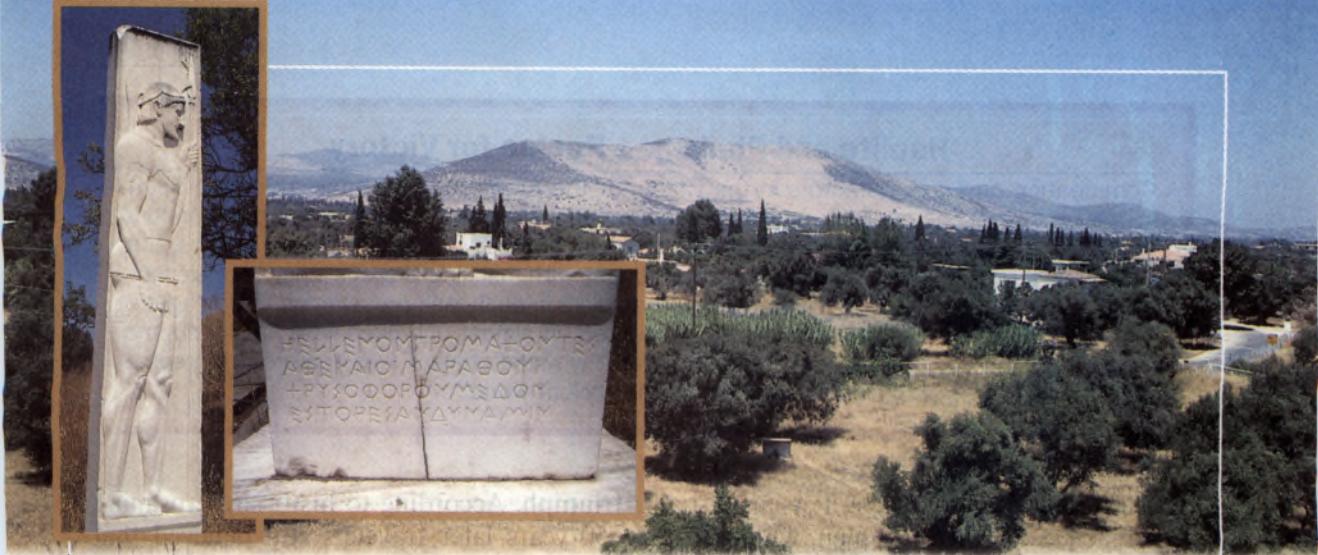
When Athens, Sparta, and Eretria scornfully refused to satisfy the demands of Persia, a powerful force of Persian cavalry and infantry embarked for Greece in the early summer of 490 B.C.E. By August the Persians were ready to deal with Athens and its territory, Attica.

Questions of Strategy

The Persians landed at Marathon and then crossed the marshy plain of Attica's east coast, which was only 26 miles from Athens. The prospects were very bleak for the Athenians, who barely managed to gather a mere 9,000 foot soldiers, plus another 1,000 from Plataea, without any support from either cavalry or archers.* Although they asked for Sparta's help, their pleas fell on deaf ears—the Spartans were busy with religious ceremonies honoring Apollo. Thus, with their limited military resources, the Athenians had to fight the Persians alone.

Ten different generals acted as a committee to determine, by majority vote, matters of strategy. Now they had to decide upon two matters at hand. First, should they keep

* The figures for the battle of Marathon seem to be in dispute. Will Durant claims that the Greeks "had some twenty thousand men, the Persians probably one hundred thousand."



The Plain of Marathon. Insets: Monument to the 192 Athenians who died in the battle

their forces in Athens to defend the city, or should they meet the Persians in the field? Taking into consideration that the city of Athens had no strong protective walls to defend it, the assembly voted overwhelmingly to fight it out at Marathon.

Second, should they attack despite the odds against them—primarily the numerical superiority of the Persians—or should they stand and wait, all the while hoping that the Spartans would somehow arrive soon enough to help them successfully resist the formidable Persian onslaught?

General Miltiades—A Strategist

One key figure that emerged to play the role of leader was the Greek general Miltiades. He was an experienced and innovative army leader, a veteran who had fought on the side of the Persian army during earlier campaigns in the north. Therefore, he knew the enemy firsthand. He had good knowledge not only of the makeup of the Persian army but also of their weapons and, most important, of their battle strategy. Additionally, during the days prior to the battle, he judiciously studied very closely the surroundings of the battleground.

Miltiades was also aware that a quick response was necessary, since within the newly established Athenian democracy, there were pro-Persian factions that would welcome a defeat of Athens. On the night before the battle, a Persian defector slipped into the Greek camp with news that the Persian cavalry had temporarily withdrawn. One theory has it that the Persian cavalry had embarked for a possible attack on Athens from the east coast of Attica so that it could capture the city immediately after an almost sure victory at Marathon. Whatever the reason, this removed the gravest danger facing the Athenian foot soldiers.

As dawn broke, the Greek phalanxes charged. (See box, page 24.) The astonished Persians retreated but soon counterattacked and broke through the center of the Greek battle line. Thereby, the Persians unwittingly fell into Miltiades well-laid trap! He had purposely left the Greek center weak in order to strengthen his flanks with added rows of men. Now, the strong flanks suddenly swept around, falling upon the Persians and killing them in vast numbers until the remnants who managed to survive the onslaught fled back to their ships. The result

Hoplite and Phalanx—Recipe for Victory

Commenting on two key factors in the victory of the Athenians, the book *A Soaring Spirit* says: "The hoplites, as Greek infantrymen were called, had stronger body armour than their Persian counterparts, sturdier shields and longer spears. But more to the point, they fought with machine-like efficiency in phalanxes up to 12 ranks deep, the soldiers in each rank pressing so close together that their shields presented an almost unbroken wall. Facing such a prospect, the Persians learnt why the phalanx was the most fearsome engine of war known to the ancient world."



The Complete Encyclopedia of Illustration/J. G. Heck

was a tremendous massacre. Persian casualties reached about 6,400 men, whereas the Athenians lost only 192 of their men.

According to legend, the news of the Greek victory was sped back to Athens by a messenger. An erroneous tradition says his name was Pheidippides, but, in fact, Pheidippides ran from Athens to Sparta before the battle to seek help. Another young Greek, legend says, did run the 26 miles from Marathon to Athens and upon arriving cried out, "Rejoice, we conquer!" and then dropped dead. This is said to be the first marathon—hence the origin of the word—which set the precedent for the modern-day long-distance footrace as we know it.

Although some of the Persian ships were set on fire, the great majority of the fleet of 600 ships managed to sail around Cape Colonna, located at the southern tip of Attica, and reach Athens. However, the victorious Athenian army got there first and met them again. The Persians were forced to withdraw. The Athenians had achieved a victory against all odds!

Athens was overjoyed, especially because the victory had been won without any help from the Spartans.

The Battle's Significance

Marble and bronze memorials at Marathon and Delphi immortalized the Athenian

triumph. According to historian Pausanias, 650 years later travelers still believed that they could hear ghostly noises of battling men when they crossed the battlefield.

Why was the battle of Marathon significant from a Bible standpoint? It was a hint, 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.

As one gazes at the Tomb of Marathon, which still stands on the battle site, one is reminded of the high toll in death and suffering that mankind has paid in the constant quest for power and dominance. The blood-stained pages of history, the silent battle-fields, and the lonely tombs are full of "great men," "heroes," and "losers," all victims of world politics and the struggle for power. However, the time is at hand when all political power struggles will be over, for God has prophesied: "In the days of those kings the God of heaven will set up a kingdom that will never be brought to ruin. And the kingdom itself will not be passed on to any other people. It will crush and put an end to all these kingdoms, and it itself will stand to times indefinite."—Daniel 2:44.

* For more information on the fulfillment of Daniel's prophecies, see "*Your Will Be Done on Earth*," pages 190-201, published by the Watchtower Bible and Tract Society of New York, Inc.



Is This the Game for You?

DEENDING on one's perspective, *Doom* is either a heart-pounding shoot-'em-up that takes computer games to a new level of technical sophistication or an orgy of graphic violence that takes computer games to a new low." Thus wrote Peter Lewis in the "Personal Computers" column of *The New York Times*. Of course, many computer games are thinly disguised violence, bloody massacres, or even blatant pornography. The recent addition—*Doom II*—is expected to become a top seller even at \$69.95. Is this type of game appropriate for peace-loving Christians? Lewis' continuing description may help you to decide.

"The player assumes the identity of a tough Marine stationed on one of the Martian moons when an industrial accident opens a corridor to Hell.... The Marine has to maneu-

ver through labyrinthine hallways, . . . punching, shooting, roasting and chain sawing the demons and former humans at nearly every turn....

"The advances in *Doom II* are easily summarized: More demons, more claustrophobic corridors, more weapons and more gore."

Commenting on a computer convention in Las Vegas, Nevada, *The New York Times* stated: "This year's most obvious novelty was multimedia pornography . . . It attracted some of the conference's biggest crowds."

The Bible writer James said: "The wisdom from above is first of all chaste, then peaceable, reasonable, ready to obey, full of mercy and good fruits." (James 3:17) Parents, have you checked the home computer games your children use lately? Need we say more?

What Is the Meaning of Life?

"DARWINISTS ARGUE THAT NATURAL SELECTION IS A SUFFICIENT EXPLANATION OF ORGANIC LIFE. YET IT SEEMS COMMON SENSE THAT, IF AN ORGANISM MOVES TOWARDS GREATER COMPLEXITY, SELF-CONSCIOUSNESS AND INTELLIGENCE, THEN IT IS BECAUSE THOSE QUALITIES ARE DESIRED."

—DYLAN THOMAS (1914-53, WELSH POET AND AUTHOR).

THE quest for the meaning of life is not new. It has preoccupied the minds of the curious for centuries. A recent poll shows that it is on the minds of New Zealanders, more so today than ten years ago. Forty-nine percent of the population 15 years of age and older, says the report published in the *Listener*, "thought about the meaning of life often," up from 32 percent when a similar survey was conducted in 1985.

New Zealanders seem to be expressing feelings shared by people of other nations. Continues the *Listener*: "The increasing tendency to question the significance of our existence may indicate that we are more anxious now than we were in the 80s, less certain of direction."

Evidently, answers given by evolutionists to the universal question, Why are we here? are not satisfying to a growing number of people. Can the Bible supply the moral compass needed to find meaning in one's life?

"Primary Motivational Force"

Of all earth's creatures, only man ponders the purpose of life. Do you know why? The Bible gives one reason at Ecclesiastes 3:11. Concerning the Cre-

ator, it says: "He has given men a sense of time past and future." (*The New English Bible*) Although all living things tend to cling to life, it seems that man is unique in having a concept of time—past, present, and future. Man can meditate on the past and look toward the future, planning for it, yes, even strongly desiring to share in it. And he can become frustrated when he cannot realize his dreams about the future because of the transitory nature of his short life span.

Thus, man alone asks the questions, Why am I here? Where am I going? Psychiatrist Viktor Frankl wrote: "The striving to find a meaning in one's life is the primary motivational force in man. . . . There is nothing in the world, I venture to say, that would so effectively help one to survive even the worst conditions, as the knowledge that there is a meaning in one's life."

Solomon's Discovery Confirmed by Jesus

The need to find meaning in life intrigued the ancients. Let us turn the pages of history back three thousand years to the kingdom of Israel under the rule of Solomon. Of him, the Queen of Sheba said: "True has the word proved to be that I heard in my own land



"The Thinker," by Rodin

about your matters and about your wisdom. And I did not put faith in the words until I had come that my own eyes might see; and, look! I had not been told the half. You have surpassed in wisdom and prosperity the things heard to which I listened."—1 Kings 10:6, 7.

In writing the Bible book of Ecclesiastes, King Solomon informed his readers of the results of an experiment that he conducted to illuminate the purpose of life. It was an experiment in opportunities to enjoy life that fit a typical king of the ancient East. In chapter 2, verses 1-10, he painted a life of pleasure that is hardly conceivable today. He tried everything that life offered in the way of material riches and fleshly pleasures. What was his assessment of the meaningfulness of such pursuits? His answer should startle the overconfident.

When he looked back on all these things, his judgment was often negative. They were futile, a waste of time. He wrote: "I, even I, turned toward all the works of mine that my hands had done and toward the hard work that I had worked hard to accomplish, and, look! everything was vanity and a striving after wind, and there was nothing of advantage under the sun."—Ecclesiastes 2:11.

He concluded that, at best, earthly pleasures bring only temporary pleasure. Even human wisdom cannot deliver man from the pain and anguish of life.

Jesus Christ concluded similarly when, in response to a man's undue concern over a material inheritance, he said to the listening crowd: "Keep your eyes open and guard against every sort of covetousness, because even when a person has an abundance his life does not result from the things he possesses."—Luke 12:15.

Only Jehovah God can totally overcome human frailty in everyday life and give wise purpose to man's actions. Thus, life without God is futile. As recorded at Ecclesiastes 12:13, Solomon explained: "The conclusion of

the matter, everything having been heard, is: Fear the true God and keep his commandments. For this is the whole obligation of man."

Discovering the Meaning of Life

Solomon's verdict that life's meaning cannot be divorced from a wholesome fear of God was repeatedly confirmed by Jesus Christ. "It is written," Jesus said, quoting God's Word, "Man must live, not on bread alone, but on every utterance coming forth through Jehovah's mouth." (Matthew 4:4; Deuteronomy 8:3) Yes, for one's life to be fulfilling, the spiritual dimension cannot be ignored. Of himself, Jesus said further: "My food is for me to do the will of him that sent me and to finish his work." (John 4:34) Obediently serving his heavenly Father was a source of joy and satisfaction. It nourished him. It gave purpose to his life.

Therefore, can life reach its full potential without God? No! Interestingly, historian Arnold Toynbee once wrote: "The true purpose of a higher religion is to radiate the spiritual counsels and truths that are its essence into as many souls as it can reach, in order that each of these souls may be enabled thereby to fulfil the true end of Man. Man's true end is to glorify God and to enjoy Him for ever." The prophet Malachi expressed God's view: "You people will again certainly see the distinction between a righteous one and a wicked one, between one serving God and one who has not served him."—Malachi 3:18.

IN OUR NEXT ISSUE

Aquaculture—Fish as "Livestock"

The Termite—Friend or Foe?

**My Successful Search
for the Meaning of Life**

WATCHING THE WORLD

The High Cost of Vehicle Theft

According to recent figures released by Statistics Canada, 146,846 vehicles were stolen in Canada in 1992, a record high. This amounted to a theft rate of 8.4 for every 1,000 vehicles, while the rate for the United States was about 8.3, said the newspaper *The Vancouver Sun*. Stolen vehicles were seldom returned in their original condition, and the report noted that "losses from the theft of autos, of property from autos, and from vandalism to vehicles amounted to \$1.6 billion in 1992." These losses are some 30 times greater than those from credit-card fraud and theft and about 500 times greater than what is lost through bank robberies. Joyriding was cited as the most common reason for vehicle thefts. "Youths aged 12 to 17 years accounted for nearly half of those charged with auto theft," added the *Sun*.

Serial Diner

One New Yorker has been in and out of prison over 31 times for the same offense: stealing a meal. The 36-year-old man will enter a restaurant, order a fine aperitif and a nice meal, and finish with black coffee. When the check arrives, he informs the waiter that he has no money and waits to be arrested. Why does he do it? "It's tough on the outside," the homeless man says. There is order in prison, you dine on time, and the food is good, he contends. Besides, he does not want to rob or hurt people; he just wants to eat well and have a clean bed and a peaceful place to sleep. So he always pleads guilty in court and

seeks the full sentence. Housing him in prison costs taxpayers \$162 a day. In fact, his recent \$51.31 meal cost them \$14,580 to keep him in jail for his 90-day sentence. He has cost New York over \$250,000 during the past five years. "Legal Aid lawyers," says *The New York Times*, have "seen a small but growing number of people who commit petty crimes with the intent of going to prison" for "refuge from poverty or hunger."

Ask Your Dentist

Recent speculation on the possibility of transmitting the AIDS virus through dental procedures is making people nervous. A study conducted by the American Dental Hygienists' Association revealed that 83 percent of dental patients



worry about contracting an infectious disease while receiving dental care. According to *American Health* magazine, patients should make sure not only that the dental staff wear gloves and masks but that they change them between patients. Reusable instruments should be heat-sterilized after each patient. *American Health* notes that "cold-sterilization techniques, such as cleaning the equipment with alcohol, are in-

adequate." The magazine adds that "if your dentist is unwilling to answer your questions, find another dentist."

Contaminated Travelers

Between 20 and 50 percent of the four billion people who travel each year are affected by diarrhea, usually because of contaminated food or water, estimates WHO (World Health Organization). Travel fatigue, jet lag, or a change in diet and climate may contribute to the problem by weakening the travelers' resistance. To reduce the likelihood of diarrhea, WHO recommends the following: Make sure that food is thoroughly cooked and is still hot when served. If drinking water may be unsafe, boil it or disinfect it with reliable tablets available in pharmacies. Avoid raw foods except for fruit or vegetables that can be peeled or shelled. "Remember the dictum," says WHO, "Cook it, peel it or leave it."

Catholic Transgressions

According to *The New York Times*, Pope John Paul II is urging Catholics to atone for their transgressions committed against humanity over the past 2,000 years. The pope said that the church should "become more fully conscious of the sinfulness of her children." Evidently these transgressions are related to the role Catholics played during the horrific Spanish Inquisition and the Nazi Holocaust. The *Times* notes that "the question of atonement for Catholic errors is sensitive because it implies fallibility in the church's depiction of its truth."

The newspaper added that some cardinals felt that "it was more important to examine modern ethical failures."

Guns in America

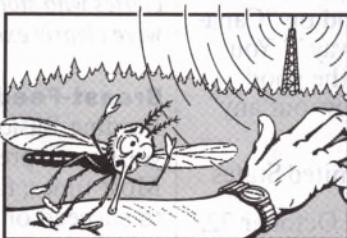
According to a recent report, there are about 200 million firearms circulating among the general public in the United States. On the average, someone is shot every two minutes. Every 14 minutes someone dies from a gunshot. Every six hours a child or a teenager commits suicide with a firearm. The report states that on any given day, American children bring to school about 270,000 firearms. *Redbook* magazine explains that "between 1979 and 1991, nearly 50,000 children were killed by guns—roughly equal the number of all Americans killed in the Vietnam War."

India's Couples Under Siege

In India, marriage "is under siege in what is rapidly turning into a 'me-first' society," states the magazine *India Today*. More and younger couples are streaming to the courts with their quarrels. Counselor Dr. Narayana Reddy reports that "the number of people coming in for professional counselling in the first few years of marriage has doubled in the last five years," according to *India Today*. Some couples have sought professional help within days of their wedding. For the most part, there is *nothing new* about the factors causing havoc among Indian marriages: adultery, alcoholism, financial and property disputes, difficulties with in-laws, and sex issues. Stress "has become the omnipresent, invisible and malevolent stranger in the Indian home."

Antimosquito Radio?

It is claimed that a radio station in Poland has introduced an innovative method to combat that age-old pest the mosquito. The French nature magazine *Terre Sauvage* reports that during a mosquito hatching season in Poland, thousands of radio listeners were able to fight these annoying insects without the use of pesticides. They



merely tuned in their radios to a station named Radio Zet. According to *Terre Sauvage*, the radio station broadcast a continuous signal that, while inaudible to humans, could be heard by mosquitoes. The broadcast was an electronic imitation of the high-frequency sounds emitted by bats that feed on mosquitoes—enough to drive off any mosquito within hearing distance.

More Are Growing Old

The human family is getting older. *World Health*, a journal of the World Health Organization, explains that "every month, the present world total of 360 million persons aged 65 and over increases by 800 000 individuals." During the next 30 years, the number of elderly is expected to reach an estimated 850 million. Europe and North America are experiencing a sharp growth in the percentage of older people because of "persistent low fertility and increasing life expectancy" in those countries, says *World*

Health. The magazine notes that "Sweden now has the world's 'oldest' population, with more than 18% of its citizens aged 65 or over."

Food and Health in Britain

"Britons are among the unhealthiest of Europeans," claims the British magazine *The Economist*. A recent study revealed that about half the adult population in Britain is "clinically overweight or obese—which may explain why Britons are, after the Czechs, more liable to heart disease than any other nation," says *The Economist*. The government's Committee on the Medical Aspects of Food Policy has made a number of recommendations to improve the situation. Its suggestions included eating more "fish, bread, vegetables and potatoes" and reducing the intake of salt, sugar, and fat.

Ozone Depletion

OMM (World Meteorological Organization) in Geneva, Switzerland, predicts that despite efforts to reduce damage to the earth's ozone layer, the depletion of the protective layer will continue to accelerate at least until the end of the 20th century. According to the news service *France-Presse*, OMM's conclusions are based on the observations of 266 scientists over the last four years in 29 different countries. Measures taken thus far to reduce ozone-damaging industrial emissions are apparently beginning to have the desired effect. But the OMM report revealed that there is a "global and continuing decline" in the integrity of the earth's stratospheric ozone layer and warned that the most critical period "is still ahead of us."

FROM OUR READERS

Awake! Improved I recently found a copy of the April 8, 1994, *Awake!* in my screen door. Wow! What has happened? You have created an up-to-date, informative "90's" publication. I find the transition staggering, and for the first time, I actually read the articles. (I would normally think, 'Oh, they were here again,' and toss it.) There was something there for everyone. I particularly enjoyed the articles on cancer and on "Canada's Magnificent 'Moving Roadway.'" You are on the right track. Keep up the good work, and I promise I won't throw out any more copies until I read them.

D. G., United States

Geographic Mix-Up In your October 22, 1994, articles about missionaries, entitled "Moving West Into Europe," you state that Boniface "dared to fell the sacred oak of Thor" at Geismar, near Göttingen, Germany. As far as I know, the Geismar in question is not near Göttingen but near Fritzlar.

A. L., Germany

You are quite correct. It turns out that there are two places called Geismar, and we got them confused. Thanks for pointing out the error.
—ED.

Religion and War Your October 22, 1994, series "When Religion Takes Sides in War" discussed what you perceive as a failure on the part of Catholic leaders to condemn war outright. But history reveals otherwise. At the outset of Hitler's persecution of German Jews, Cardinal Faulhaber of Munich preached sermons in which he defended the Jews. Other heroic clerics condemned outright the Nazi laws which forbade intermarriage between "Aryans" and Jews. After the outbreak of World War II in Europe, Hitler closed Catholic schools, suppressed the Catholic press, and, in Poland, closed all convents, monasteries, and seminaries.

J. L., United States

The articles were based on fair and reputable sources. For example, the book "German Catholics and Hitler's Wars" was written by Gordon C. Zahn, who is a Catholic professor. Frankly, the evidence is overwhelming that, at least in the early stages, the Catholic hierarchy gave overall support to the Nazi party. This does not mean that there were not some individual Catholic clerics who stood up against the Nazis. But these were clearly exceptions.—ED.

Breast-Feeding Your article "Breast-Feeding Basics" (August 22, 1994) went beyond your previous articles on the subject. Most times, fathers leave it up to their wives to succeed or not. But your article actually told fathers and other family members what they could do to help make breast-feeding a success.

D. D., United States

I had the wonderful experience of breast-feeding each of my two children. There were initial problems, such as soreness, but with encouragement from my sister and advice from my doctor, I overcame the difficulty. I would encourage every mother who can to breast-feed her baby, as the deep bonding between mother and child is a fascinating experience one never forgets.

U. B., Germany

Mystery Ailment Having been a reader of your magazines since age five, I really appreciated the article "Guam's Mystery Diseases." (August 8, 1994) My mother, who was a faithful servant of God up to her death in 1972, was a victim of this disease. I want to thank you for the information and the thorough explanation you gave. I have shared this issue with my family and friends to show the value of your magazine.

W. A., United States



A Crab With an Unusual Taste

By Awake! correspondent in the Solomon Islands

THE coconut crab—does that sound exotic?* It is found in just a few places, including the islands of New Georgia, part of the Solomon Islands.

"Coconut crabs? Yes, they are here," explain the local people, "but you will have to go looking at night." These nocturnal crabs spend the daytime deep in the hollow centers of rotting trees in the dense jungle undergrowth. Coming out at night, they feed on, yes, coconuts, from which they tear the husks with their mighty pincers, but they also eat a variety of soft green vegetation. To see this intriguing creature, one must look for the telltale signs of torn husks left at the entrance of black hollows in the rotting trunks of fallen trees.

The islanders explain that during June and July, the crabs burrow into the ground, and there, after shedding their outer casing, they grow a new, larger suit of armor before emerging. As some coconut crabs live up to 50 years, one can appreciate the huge sizes they can reach. As I watched, one emerged from its burrow, with a leg span of about 20 inches.

Sadly, the seeming safety of their molting burrow is no defense against the hunting

er, who can read the circular depression in the ground that marks the beginning of the burrow. In no time the defenseless creature is dragged out, destined for the gourmet's table. Restaurants in Asia highly prize this crab, especially the meat in its soft, round, vulnerable rear appendage.

So here in the Solomon Islands, the possibility of the coconut crab's extinction is a real concern. The Fisheries Department sets limits on the number of egg-bearing females and on the size of crab that can be exported. Some have suggested setting up farms from which the crabs could be released into their natural habitat. But much research would be needed, as not enough is known about their breeding habits.

The case of the declining coconut crab population further underscores the need for a world system that will establish a balanced environment. Under it, each one in the amazing spectrum of the Creator's earthly creatures can play its part in fulfilling the prophecy of Psalm 148:5-10: "Let them praise the name of Jehovah; for he himself commanded, and they were created. . . . Praise Jehovah from the earth, . . . you creeping things and winged birds."

* Also known as the robber crab.

Developing a Healthy Society



THE deputy editor of *New African* magazine wrote recently: “Go to any African country today and you will find a small elite living in luxury while the masses are suffering in grinding poverty. . . . How can we escape this poverty trap? The simplistic solution is: remove the elite and share the wealth. In practise this doesn’t work. To begin with, there is just not enough to go around. Secondly, remove the elite and they will immediately be replaced by another. Thirdly, experiments in socialist ideals have only [succeeded] in distributing poverty equally.”

“There is only one solution to development that has worked in all countries in all ages: the development of the individual. It is people who create societies. Well educated, healthy, positive and inventive people will inevitably produce healthy, vigorous societies.”

Had the deputy editor been looking for an example, he would have found one in Jehovah’s Witnesses. In Africa, indeed throughout the world, the Witnesses are working

to help people to become educated, healthy members of a global society. Among other things, they teach illiterate adults to read and write. Through their publications, they offer instruction in hygiene, health care, and family relationships. At their meetings as well as on an individual basis, the Witnesses encourage one another to conform to Bible counsel to be honest, hardworking, and productive.

The result is a strong, vibrant society made up of nearly five million people worldwide. But the Witnesses do not take credit for this. They attribute their spiritual prosperity to the living God, who says: “I, Jehovah, am your God, the One teaching you to benefit yourself, the One causing you to tread in the way in which you should walk.” —Isaiah 48:17.