

Awake!

Are Science and the Bible Irreconcilable?

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Is Space a New Frontier?

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Coping with the Rh Threat in Childbirth

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Let Your Land Cut the Cost of Living

PAGE 20

APRIL 8, 1965

THE REASON FOR THIS MAGAZINE

News sources that are able to keep you awake to the vital issues of our times be unfettered by censorship and selfish interests. "Awake!" has no fetters. It records facts, faces facts, is free to publish facts. It is not bound by political ties; it is not pered by traditional creeds. This magazine keeps itself free, that it may speak freely to you. But it does not abuse its freedom. It maintains integrity to truth.

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Awake!

"It is already the hour for you to awake."
—Romans 13:11

Volume XLVI

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Number 7

AMBITION OR LEGITIMATE DESIRE?

IN THIS system of things the ambitious, aggressive person seems to be the one who gets ahead. On the other hand, there is a tendency to scorn those who manifest no ambition. Neither type is really appealing, but can you put your finger on the reason? The fact is that the desire to get ahead can be praiseworthy and it can also be something quite opposite. How, then, can a person get the proper balance in the matter and steer his own thinking and actions in right channels?

The desire to get ahead is so general that it crops up at every stage of one's life. Children are usually very competitive. At school the big question among many is, Who is going to get to the top of the class? In countless homes it is often a question of who is going to have his own way—father, mother, young John or Mary? At secular work there are positions and promotions for which there is keen competition. No wonder the prevailing attitude can be described as 'everyone for himself'!

An outstanding Bible example of one motivated by the spirit of selfish ambition was Joab, commander of the armies of Israel under King David. His career reveals an insatiable thirst for position and power.

The attainment of his objectives involved fierce competition, ruthless liquidation of rivals, disobedience to orders, refusal to accept reproof, yes, and even seditious conspiracy against the anointed king who had dealt with him so patiently and leniently. (2 Sam. 3:27; 18:14; 19:13; 20:9, 10; 1 Ki. 1:18, 19; 2:5) Ambition to become great, to shine above one's fellow creatures, is so like a wild, uncontrolled fire—it is never satisfied until it has destroyed everything in its path, everything, ironically, on which it depends for its own continuation.—Prov. 30:15.

The heavy cost that must be paid to satisfy selfish ambition is often overlooked until it is too late. All along the way there are disappointments, frustration and hostility inducing tensions that are destructive to health and happiness. Each reputed success falls far short of anticipation. Life tends to become a dreary succession of hollow victories, and the victor, when he gets to the top, finds that he no longer has anyone he can truly call his friend.

When on earth, Jesus Christ faithfully transmitted to his followers his Father's view on this subject. On one occasion his mother's sister, Salome, approached and

asked for special privileges to be granted to her sons, James and John, in the kingdom of the heavens. Note how the Master's well-chosen words quieted the indignation of the other disciples and set the issue at rest: "You know that the rulers of the nations lord it over them and the great men wield authority over them. This is not the way among you; but whoever wants to become great among you must be your minister [servant], and whoever wants to be first among you must be your slave."—Matt. 20:25-27.

Jesus did not deny that there would be among his joint heirs of the Kingdom those who would be "great" and "first." But in what sense? In that through hard work and devotion to the overall interest of the Christian congregation they would prove themselves capable of assuming responsibility. Quite different this from the self-promotion campaigns of worldly-minded persons who, without hesitation, use their competitors as steppingstones to greater heights.

In view of this and the Bible's condemnation of rivalries and selfish competitions, is all desire for a position of responsibility wrong? (Gal. 5:26; Eccl. 4:4) No, for the apostle Paul wrote his young fellow missionary, Timothy: "If any man is reaching out for an office of overseer, he is desirous of a fine work." (1 Tim. 3:1) So, what is the essential difference between dangerous ambition and legitimate desire to get ahead? In one word the answer is "humility." The ambitious contriver fancies himself to be worthy and capable of any office at which he aims, and is impatient to get there. Legitimate desire, on the other hand, is coupled with a humble recognition of the need to prepare and qualify oneself through hard work so as to be able to do justice to the desired office.

In school, how refreshing to meet a student who truly excels in class but modestly ascribes his success to hard work and long hours of study! What an atmosphere of peace and well-being we see in a home where wife and children are striving to improve in their respective positions, while always maintaining proper subjection to the God-ordained head of the household, the father! In secular work, how highly prized the employee who shows concern for improving the quality of his work rather than using all the shortcuts to the top position in the firm!

So, whether we occupy the role of wife or child in the home, or employee in a business firm, or member of a Christian congregation, we do well to avoid the pitfall of selfish ambition. If we would do so, we must never succumb to the impatient desire to be or to do those things for which we are neither trained nor equipped. Such ambition can lead us away on a heartless bid for position and power, ending up most often in bitter disillusionment. On the other hand, legitimate desire to progress in school, in the home, at secular work or in a congregation of Christians will move us to undergo training with all patience, while we humbly await higher direction in the matter of promotion to a position of greater responsibility.

It is very important, too, to keep in mind that the most worthwhile promotion or exaltation comes from one who cannot be deceived as to our motives, for the inspired psalmist wrote: "Do not exalt your horn [strength, power] on high. Do not speak with an arrogant neck. For neither from the east nor from the west, nor from the south is there an exalting. For God is the judge. This one he abases, and that one he exalts." (Ps. 75:5-7) His promotions carry with them peace of mind and they do not result in harm to others.

"THERE exists a unique, inexhaustible book which contains all that is to be said about God and man. . . . It would be just as useless to claim to understand the principles of ethics and law as to pretend to comprehend sociology, economics and even politics, if one were unfamiliar with the message contained in this book. Art and literature depend on it even more obviously. Without it, neither the sculptors of Chartres nor the mosaicists of Ravenna, neither Michelangelo, Rembrandt or El

Greco would have been the same as we know and admire them. . . . Without this book, the West would not be what it is."

Indeed, the Bible—for that is the book Daniel-Röps, member of the French Academy, is referring to in the above quotation*—has been praised by men as widely separated ideologically as Nietzsche and Pascal, not to mention Racine, Shakespeare and Goethe. Yet today many men do not believe in the Bible. Why? How is it that the book that is a "must" in any self-respecting bookcase is followed less and less as a practical and spiritual guide?

The current disbelief in the truthfulness of the Holy Scriptures should not come as a surprise. One of the penmen who wrote the Bible, Paul by name, testified nineteen hundred years before the present crucial period of time: "The inspired utterance says definitely that in later periods of time some will fall away from the faith, paying attention to misleading inspired utterances." (1 Tim. 4:1) In this so-called Age

* *Qu'est-ce que la Bible?* (What Is the Bible?), by Daniel-Röps, pages 1, 2.



of Reason, there is a veritable deluge of 'misleading utterances' pronounced in the name of truth.

Science also Requires Faith

Among these 'misleading utterances' that undermine people's confidence in the Bible are the hypothetical explanations taught as scientific facts. Since many of these theories contradict the Bible, thousands of people, misled by such utterances, are convinced that the Scriptures are outdated on scientific matters and that science and the Bible are irreconcilable. They fail to realize that what is taught as a scientific fact is often merely a theory requiring as much faith to believe as anything taught in the Bible.

Webster gives this definition of the noun *science*: "A branch of study which is concerned with observation and classification of facts, esp. with the establishment of verifiable general laws, chiefly by induction and hypotheses." (Italics ours) Two interesting points become apparent here: first, to be authentically scientific, a sci-

covery must agree with *verifiable facts*; secondly, science proceeds chiefly by *induction*, that is, by drawing inferences, by *hypothesizing* or theorizing. Now a theory or hypothesis is nothing more nor less than a considered guess, a tentative explanation that may or may not turn out to be true.

This being so, to accept a scientific theory as established truth takes belief; it takes *faith*. This is borne out in the following statement by André Arnal, professor at Montpellier University, France: "All intellectual activities require faith. . . . First principles and primary facts are at one time denied and at another time affirmed, and the same is true of the hypotheses which are built upon them. Moreover, the sciences, both the mathematical and natural sciences, are also based on belief. Neither do they question their starting point, nor their basic data; they accept both as self-evident. The reason why geometers, physicists and astronomers obtain—at least most of the time—*corresponding* results, whereas moralists, philosophers and sociologists reach different *conclusions*, is that the latter discuss and question the primary notions of the problems studied, whereas the former accept without discussion or questioning the basic primary notions. It is a formal error, which has been formally exposed, to suppose that human knowledge is based on an unquestionable foundation. No research, no theory . . . exists that does not require faith."

Science worshipers are fond of saying: 'Do not believe it just because it is in the Bible.' Since scientific theories also require faith, Bible-believing Christians are within their rights in replying: 'Do not believe it just because it is taught by scientists.'

Scientific Myths

The fact is, human science has *at all times* taught some fantastic myths as

"scientific truth." Here are a few examples. Until the end of the eighteenth century, combustion or burning was explained by many strange theories. One of these, considered to be thoroughly sound, held the center of the scientific stage for over a hundred years. Two German chemists, Johann Becher followed by Georg Stahl, conceived the *phlogiston theory*. To quote Webster: "According to them, every combustible (*phlogisticated*) substance is a compound of *phlogiston*, and the phenomena of combustion are due to the *phlogiston* leaving the other constituent behind. . . . Soot and coal were regarded as almost pure *phlogiston*, and sulphur as very rich in it. The theory produced fruitful results and held sway for a century." Held sway among whom? Among scientists. According to the French encyclopedia *Larousse du XX^e siècle* (*Twentieth Century Larousse*), "*phlogiston* was considered to be one of the great powers of nature." The same work adds: "[French chemist] Lavoisier was the first to destroy this false interpretation of combustion, proving that the latter is a chemical combination that occurs with a great release of heat." So much for the *phlogiston* myth!

Another "scientific truth" that held for centuries was that the universe had always existed. In his book *Métaphysique* (*Metaphysics*), Paul Foulquié states the problem quite clearly as follows: "Science teaches us that the world is evolving. . . . These facts lead us to ask ourselves if the material world has always existed or how it came into existence. Only two answers to that question are possible: either matter is eternal and exists of itself, or it was created and exists through God. For a long time, philosophers accepted the eternal existence of matter and never sought the reason for its existence. The Jewish religion was the first to introduce the idea of

direct creation, the divinity having been considered up until that time as the organizer of pre-existent matter."

Thus, whereas for centuries pagan religions, philosophers and scientists were teaching that matter had existed from all time, the religion of the Jews taught mankind that matter had a beginning, that it was brought into existence by an intelligent Creator. Now, in what set of holy writings was the Jewish religion "the first to introduce the idea of direct creation"? It was in the writings now preserved in the Bible and more particularly in the book of Genesis, which is precisely the part of the Scriptures most violently attacked by agnostics. The opening verse of the first chapter of Genesis states a truth that no scientist has ever been able to disprove, namely: "In the beginning God created the heavens and the earth."

These very first words of the Scriptures certify that the material universe had a beginning. Today scientists admit that matter has not always existed. Some say the universe began three billion years ago, others put the big start at four and a half billion years back. Whichever of these figures might be correct, or whatever others might be put forward by the scientific world, the fact remains that modern-day cosmogonists* accept that the universe had a beginning. They have exploded the myth of their predecessors who taught that matter was eternal and self-created. Which was right, science or the Bible? Which of them had to change its ideas and bring them up-to-date, science or the Bible? Decidedly, the Holy Scriptures have nothing to lose in being confronted with modern science, since the latter has taken centuries to discover a truth stated thousands of years ago in the opening words of Genesis.

* A cosmogonist is one versed in the science of the origination of the universe.

The Origin of Life

Life has not always existed on the earth. All cosmogonists agree on that point. What they do not agree upon is how it started. Two solutions are possible: creation or spontaneous generation. In other words, either life was caused or it came about of itself. The first of these explanations is the one offered in the Bible; the second is the one put forth by atheistic scientists. That this choice is inevitable is borne out by the French *Larousse* encyclopedia, which states under "Biogenesis": "Obviously, if one rejects creationism, one is absolutely obliged to admit the origination and formation of living substances out of surrounding inorganic matter." But how plausible is this second theory, also called abiogenesis?

In a speech he made at the Sorbonne (Paris University) in 1864, the renowned French biologist Louis Pasteur quoted examples of the explanations put forward in support of spontaneous generation. The following is one he quoted from a famous seventeenth-century Flemish physician and alchemist, Van Helmont, who stated: "Dig a hole in a brick, fill it with ground basil grass, place a second brick so that it completely covers the hole, put the bricks in the sun, and within a few days the scent of the basil acting as a ferment will change the grass into real scorpions. . . . If you stuff a dirty shirt into the hole of a vessel containing grains of wheat, the ferment from the dirty shirt, modified by the smell of the grain, will cause the grain to transform into mice after about twenty-one days."—*Les plus belles pages de Pasteur (Pasteur's Finest Passages)*, by Robert Vallery-Radot, page 101.

To be sure, true science soon proved that animal life as complex as scorpions and mice could not generate itself spontaneously from grass or from a shirt, be it ever so dirty! However, the development of the

microscope soon enabled scientists to study minute objects, and the atheists among them lost no time in claiming that micro-organisms came about originally by spontaneous generation.

In 1858, French scientist Pouchet delivered a speech before the French Academy of Science and claimed to have observed the appearance of life in substances previously sterilized and free from germs. Two years later, Louis Pasteur proved conclusively that the life forms observed by Pouchet sprang from undetected germs. Pasteur proved that living organisms can be generated only by preexisting living organisms. Stated otherwise, life proceeds from life and not from inanimate matter. This is in harmony with the Bible and is established by true science. The two are not irreconcilable.

Honest scientists admit they know little or nothing of how life began. In his book *De la matière à la vie (From Matter to Life)*, French biologist Rémy Collin writes: "Science has done wonders, as our material civilization shows; but it has been unable to make life reveal its secret. After all our investigations into the field of biology, what essential truths have we learned other than what is expressed in these words: 'There are inorganic bodies and there are living beings'—nothing more than what elementary common sense tells us?" Jean Rostand, member of the French Academy, writes in his book *Pensées d'un biologiste (Meditations of a Biologist)*: "From what we know about the exceptional characteristics of protoplasm, it seems that its origin required the occurrence of highly improbable circumstances." The same famous biologist stated even more clearly in his book entitled *L'homme (Man)*: "About the origin of life, we know nothing."

Since scientists are unable to produce even the simplest living organisms in their laboratories and are incapable of explain-

ing the origin of life, what right have the unbelievers among them to cast doubt on the Bible, which, by attributing the origin of life to God, is in perfect harmony with the *established scientific fact that life proceeds from life?*

The Bible and Evolution

The "scientific myth" that is enjoying vast popularity at the present time is the evolution theory. This doctrine has been defined as follows: "Evolution is the biological theory that living species are not fixed and distinct but variable and capable of transforming themselves from one species into another. . . . Evolutionism is the contrary of creationism, which claims that living beings had a fixed form from the start and underwent no essential modification."

Which of these explanations of the origin of the species is correct, evolution or the Bible, which states in its opening page that life forms were to multiply "according to their kinds"? Are science and the Bible irreconcilable in this important matter?

True, the evolution theory is currently believed by many scientists and educators. But popularity is no reliable touchstone. Remember how popular the phlogiston theory was among scientists for over a hundred years. What do honest scientists have to say about evolution? Here are a few quotations from French authorities:

In their monumental textbook *Traité de biologie animale (Treatise on Animal Biology)*, page 1160, Aron and Grassé state: "We can live in hope, but at present let us admit frankly that we know nothing of the really determining causes of the evolution of living beings." Renowned zoologist Yves Delage wrote: "I am absolutely convinced that people are or are not evolutionists, not for reasons based on natural history, but because of their philosophical opinions."

(*La structure du protoplasme et de l'hérédité* [The Structure of Protoplasm and of Heredity], page 204) Henri Colin, member of the French Institute, admits: "The experimental proof of evolution has not been provided."

Finally, professor Louis Bounoure, of Strasbourg University, recently made this remarkable statement: "The living world only really shows us how constant the species are. . . . As a student, at the beginning of this century, I was myself subjected to the heavy yoke of evolutionist thought, but when, after much research, I discovered that evolution is an illusory and unjustified myth, I considered it my duty as a scientist to fearlessly expose this theory as an error to be rejected."—*Le monde et la vie* (The World and Life), October 1963.

Thus it is seen that with regard to the fundamental truths concerning the origin

of matter, of life and of the species, science has produced no established facts disproving the Bible. On the contrary, reliable scientific information on these matters confirms what the Scriptures said all along. In short, the conflict is not between science and the Bible, but between the Bible and unverified and unverifiable hypotheses put forward in the name of science.

Science has at all times had its myths, of which phlogiston, the eternity of matter and spontaneous generation of life are only a few examples. These particular "scientific" myths are now dead, but others, such as evolution, are still in vogue. So why cling to myths or 'misleading utterances' and reject the Bible, that "unique, inexhaustible book that contains all that is to be said about God and man"? Why go on laboring under the illusion that science and the Bible are irreconcilable? For, of a truth, they are not.

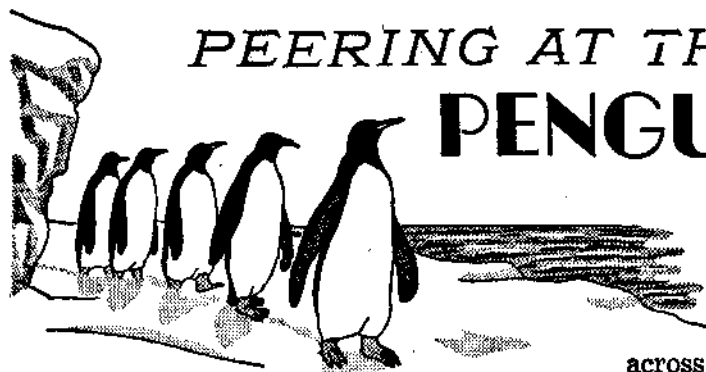
PALMISTRY'S ANCIENT ORIGIN

✓ Palmistry is regarded today as a branch of fortune-telling, the art of predicting future events or influences in the life of another. It is the practice of studying the lines of a person's palm and shape of his hand to try to discover his personality, especially past and future events in his life. Another name for palmistry is chiromancy, which means "hand divination." This form of divination goes back to ancient times. It was practiced in India from remote times. When the Gypsies migrated from India, they eventually spread the practice of palmistry throughout Europe and many other parts of the earth. Besides palmistry, Gypsy women employ a variety of forms of prediction, such as use of tea leaves and the use of special Tarot cards, which are claimed to go back to the magi of ancient Babylon. Palmistry also goes back to ancient Babylon or Chaldea: "Palmistry was known among the Chaldaean, Assyrians,

Egyptians, and Hebrews, and was recognized by the philosophers of Plato, Aristotle and Antiochus."—*The New Funk & Wagnall's Encyclopedia*, Vol. 25, p. 9310.

But was divination, whether by palmistry or any other means, something that Jehovah God approved of his people practicing? God's own Word, the Holy Bible, answers: "There should not be found in you anyone . . . who employs divination, a practitioner of magic or anyone who looks for omens or a sorcerer, or one who binds others with a spell or anyone who consults a spirit medium or a professional foreteller of events." (Deut. 18:10, 11) Thus God's Word condemns the practice of any Babylonish divination and also the consulting of fortune-tellers. True Christians seek enlightenment and guidance from the Holy Scriptures, the Book of divine prophecy that shows the future of the whole human race. —Ps. 119:105; 2 Tim. 3:16, 17.

PEERING AT THE PENGUINS



By "Awake!" correspondent in Argentina

"THERE they are—penguins!" and we went scrambling down the slope of a huge, whitish-gray sand dune. We had chosen this vantage point in order to scan the beautiful York Bay area, which lies a few miles from Port Stanley in the Falkland Islands.

We wondered if it would be possible to see these curious creatures in their natural surroundings, since we were now in the autumn month of April. By this time of the year the majority of the penguins would already have left for their real home, the sea, until the return of the South Atlantic spring months of October and November. Then their rookeries would be populated again.

We had spotted penguins swimming out in the open sea as we headed south to this island group. It was amazing to observe the great speed at which they traveled, and, with no land in sight, it was evident that they were very much at home in these cold waters.

Now, atop this sand dune, we had been scanning the Bay area. For a time it looked as if we were to be disappointed, when suddenly, far down the beach, walking erect, a little black form with a strange waddle, and then another and another—Gentoo penguins!

These Gentooos—one of several species of penguins that have established their rookeries around

the coasts of the Falklands, some 300 miles south off the eastern coast of Argentina. Their distinguishing mark is the thin white band that cuts

across the back of the head. They have an orange beak and big orange feet. They are considered the gentler group

of the penguin family. Besides the charm of their timid manner, they are also known to act very slyly, especially when it comes to stealing nesting materials from their neighbors while maintaining a thoroughly innocent look.

The Jackass penguin, so called because of his peculiar braying call, has a black-and-white-striped face and pink rimmed eyes. He carries a hook on the end of his beak that can be most damaging to anyone poking around in his underground burrow. Unlike other penguins, he likes to nest underground.

No matter where the penguin rookeries are located, whether in the sheltered coves of the Gentooos or on the steep, rocky ledges of the Rockhoppers, they are very noisy communities. From a long distance one knows, from the incessant chatter of the birds and the stench of the guano or penguin dung, that he is approaching a rookery.

Why they choose the nesting places they do is a mystery. One colony of Gentooos chose a spot some 700 feet above sea level. The trip for these clumsy pedestrians would take a good part of a day, and the route is often cluttered with obstacles, such as boulders and large tussocks or

clumps of coarse grass. Only the penguins know why they prefer this to the much more direct route.

Another species, the Macaroni, also avoids the easy direct route, preferring to jump from rock to rock upward to a nesting place high on the cliffside. The whole group will follow the same path, and deep scratches in the rocks give evidence that generations of penguins have passed over the same route. The path is usually wide enough for two-lane traffic. Normally, traffic moves smoothly, but if some ambitious penguin speeds up and bumps into another, it is the signal for a general uproar, not only with the colliding ones but also with many of the onlookers coming to blows.

These penguin highways lead from the nests to the sea. Mr. and Mrs. Penguin waddle down to the water, wade in as far as their flippers, then bend forward, and away they go—like torpedoes in the water! Their flat feet become rudders and their flippers are the means of propulsion. That is why they must be full grown before they will have enough stamina for the ardors of life in the water. To get breath they leap out of the water at intervals and hurtle through the air with flippers spread wide, and then disappear for another spell below the surface. They travel fast and, though without any obvious leader, they seem to know exactly where they are heading.

One group of Rockhoppers was observed peering over a ledge six feet above the water. The more daring ones jumped feet first. Others shied away or were pushed in by overly anxious comrades. Still other timid souls waddled down to the ledge, peered nervously over, and then wandered off in search of a less dramatic approach to the water. It surely recalled childhood days at the old swimming hole.

Enemies

To protect the penguins against their greatest enemy, man, conservation laws have had to be introduced to stop the wholesale slaughter of these comical, harmless creatures for their oil, and to head off extermination of the species through harvesting too many of their eggs, which are even preferred by natives to chicken eggs. The skua, large rapacious bird of the gull family, is another enemy that enjoys a meal of penguin egg or young penguin. Often the innate politeness of the adult penguins places their eggs or their young in danger from this winged predator. When the time comes to change shifts on the nest, they indulge in a pattern of solemn and gracious bows to each other, while the eggs or the newly hatched young are left exposed. That is quite likely to be the very time when the skua swoops down from the skies to steal his dinner off the nest.

Mr. Seal also enjoys a meal of tasty penguin meat. No match for the penguin on shore, he will lie in wait close to shore as the penguin goes out for his swim. In a surprise attack he will nab the victim in his mouth, throw him high in the air with a sudden flip of his powerful neck that seems literally to pop the penguin out of his skin. Feathers and skin washed in along the coast are the telltale evidences that Mr. Seal has been dining again.

Nesting and Mating

When the surface snow gradually melts and the outlines of the old nests begin to show through, they are at once claimed and occupied. A second penguin will then approach the one on the nest and with great solemnity deposit a pebble at the feet of the occupant, following up with some ceremonious bows and a gentle little hissing sound. Until the occupant responds, strange to say, the one penguin does not yet know

the sex of the other bird. Indeed, either male or female is likely to claim the nesting spot, and either one is willing to do the job of seeking a willing mate. Once the sex is established, however, the male shows himself most attentive, bringing pebbles or other materials for completion of the nest.

There is a wide variety in types of nests to be found among the penguins. Some of the Gentooes prefer little, round pebbles for building materials, while others use the dainty

diddle-dee plant or the stems of tussock grass. Some species burrow into the ground, while other hardier ones are known to breed in midwinter right on the ice.

Noise in the community at nesting time is doubtless enhanced by the fact that everyone likes to steal from his neighbors to 'feather his own nest.' Eleanor Rice Pettingill, in her *Penguin Summer*, describes this activity in a Gentoo colony: "There were acres of diddle-dee just at hand, but the twigs from the nests of neighbors were, apparently, more desirable. Rather than venture out of the colony, a penguin would risk blows from beaks and flippers for the sake of a secondhand twig. If a pair left a nest unguarded, it was stripped in no time, and all that was left was a bare depression containing two eggs. Some thieves did not even wait for a nest to be left unguarded but surreptitiously lifted twigs from nests while the occupants were snoozing. This seemed to require talent, better developed in some individuals than in others. If a penguin got caught, he received blows from the owner's flippers and fearful thrusts from his sharp beak. When birds returned to their nests with their loot, they laid each twig gently on the ground beside the incubating mate. One bird came

toward us with a big twig. It stepped too close to another's nest and was poked from behind. It jumped aside, trampled another nest, and was pinched in the ribs."

Papa and mamma both take turns incubating the eggs. The baby penguins eventually put in their appearance all covered with short, gray down. Commencing life at perhaps a few ounces in weight,

they grow rapidly by reason of their tremendous appetites. The parents predigest the

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seafood and then regurgitate for the benefit of their young. When the young are about two-thirds grown they will be seen standing around in groups waiting for the adults to come back with the "groceries." Sometimes the parents will run around with the food while the youngsters chase them, making the young ones do a little work for their board.

The Exodus

Moulting time is a trying time for these flightless birds. It takes about three weeks for the Rockhoppers to replace their old finery. During this time the plumage is not waterproof, so they are restricted to land. This means no feeding and consequent displays of bad temper, which keep the colony in an uproar.

Finally the new feathers of Mister and Missus have taken on their water-repellent quality, the youngsters have grown strong enough, and the whole community with their tuxedo-like jackets are ready for travel. So down the well-worn trail they solemnly march. There they go, young and old, leaving their rookery for another season and heading for the open sea—for, after all, the sea is the real home of the penguin.

IS SPACE A NEW FRONTIER?

WHEN the first man-made satellite went speeding into orbit about the earth on October 4, 1957, the eyes of the world turned toward space. Imaginations were fired by its mysteries, and glowing predictions were made about man's historic effort to reach for the stars. As always, a vast gulf exists between fact and imagination. Much is yet to be learned about space. In the meantime, the feverish research being done in the space program is predicted to bring many side benefits to the common man. Space enthusiasts already point to a number of these benefits.

Weather satellites are making weather predictions more accurate and are giving advance warnings of approaching storms. Navigation is being aided by satellites. Intercontinental television broadcasts and telephone calls are now possible because of them. New sensing and measuring instruments developed for the space program are helping doctors to improve their diagnostic techniques. Miniaturization of electronic parts is improving many types of instruments, making possible such things as a heart pacemaker for people with heart trouble. Tiny batteries developed for space

vehicles are going into wrist watches, and solar cells that get electricity from sunlight for satellites are powering portable radios. But the new things being learned about space itself may prove to be even more significant than technological benefits.

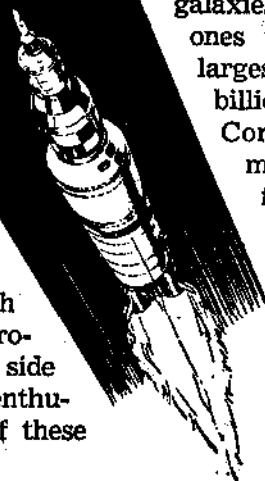
Satellites and space probes have revealed things that have changed man's views about the vast space beyond Earth's atmosphere. But much more must be learned before a manned spacecraft can be sent out there.

Space is so immense that the best human minds are unable to comprehend it. In our own galaxy there are about 100 billion stars that are stretched out over such an inconceivable distance that light, moving at a speed of 186,000 miles a second, takes 100,000 years to cross it. And this is only one of an unknown number of galaxies. Light from the most distant ones that man can see with his largest optical telescope took two billion years to reach the earth.

Compared with such vastness, man's rocket accomplishments fade to insignificance. It is empty boasting for him to talk about conquering space. With his present propulsion equipment it would require thirty-one years for him to reach the planet Neptune, and more than a lifetime for a round trip. Even if he

could travel at the speed of light, it would take him more than four years just to reach the nearest star.

Man's space efforts, limited though they are, undoubtedly will enlarge his knowledge about space and satisfy much of his curiosity about many of the bodies in our



solar system. Until now, the earth's protective atmosphere has interfered with telescopic studies of them, but with telescopes placed on satellites that circle the earth above the atmosphere, unobstructed observations can be made. Photographic space probes will also help. Pictures of the moon's surface have now been taken that are far clearer than those taken by any earthbound telescope.

Exploring New Frontiers

Whenever a new frontier opened up to man in the past, it contained many dangers that made man's exploration of it hazardous. The underwater world, for example, has opened up to man because of his diving equipment, but it is filled with dangers for him. Due to the fact that he was not made to live in water like a fish, the underwater world is hostile and alien to him. Nevertheless, he has developed equipment that makes it possible for him to explore it to even its greatest depths. The same can be said of the atmosphere.

Unlike birds, man was not created with the ability to fly but was designed to live on the ground. Despite this fact, he has opened up the atmosphere as a frontier to be explored by balloons and aircraft. As pressures at great depths of the oceans are too great for man so pressures at great altitudes are insufficient for him, causing the blood in his body to boil if he is not protected. But the hazards of high altitudes have not prevented him from flying to extremely high altitudes. The famous U-2 plane flies at an altitude of more than 14 miles, and the experimental plane X-15 has gone to 67 miles. Space capsules have carried men to an altitude of more than 100 miles. In fact, jet planes regularly take millions of people to altitudes that would kill them without protective equipment.

Special life-supporting equipment is required whether a man is traveling at 35,-

000 feet or at 100 or more miles above the earth. Both altitudes are hazardous for him, but with proper equipment he is able to protect himself. However, his success in overcoming the hazards of flying and of underwater travel does not mean he can do everything, that there are no obstacles he cannot overcome. Man is not almighty; he has human limitations. In space these limitations become more clearly manifest than in any other human undertaking. Being imperfect, man constantly makes errors, but out in space there is no room for errors. Accuracy in space travel is so exacting that the tiniest miscalculation can be fatal. How easily human errors can cause expensive failures is evident from the number of rockets that have failed to function properly.

Man in Space

In view of the fine accomplishments by highly sophisticated robot spacecraft, there has been some disagreement among scientists as to the advisability of sending man into space. Doing so greatly increases the expense of exploring it. Some claim that electronic instruments are the best means for studying the moon and the planets. They regard man as a nuisance in space, the weakest component of a space project, because of the fantastic problem of keeping him alive out there. On the other hand, there are scientists that argue in favor of sending man to other planets and to the moon. They say that man's judgment, his ability to observe, answer questions and to reason as well as his decision-making capabilities cannot be replaced by instruments.

Actually, national pride is the chief motive behind the crash program to get a man on the moon. Russia and the United States are in a race to the moon for the political prestige it will bring. If it were not for this cold-war competition, it is most unlikely that American politicians

would have voted to spend \$20 billion to send a man to the moon for purely scientific reasons. Before Russia surprised the world with the first man-made satellite, the American space program was crippled for lack of funds. Further space spectacles by the Russians, such as the first man in orbit, spurred the United States Congress to open up a golden floodgate for the hard-pressed program. A military factor is also behind the American program. There is the fear that Russian advancement in space technology might give them a military advantage. So opening up space as a new frontier for scientific knowledge is not the real reason for the crash space program in the United States.

The astronomical sum of \$20 billion could have been used for many other things that would be of more immediate benefit to the American people, such as highways, schools, slum clearance, and so forth. It is unlikely, however, that politicians would have voted to spend that much money on such unglamorous programs that have no direct bearing on the cold war. Too many taxpayers would complain.

Hazards

The hazards that man has faced when opening up new frontiers on Earth pale to insignificance when compared with those confronting him in space. There he must contend with temperatures that range from several hundred degrees below zero to several hundred degrees above zero. Even higher temperatures must be faced upon reentering the earth's atmosphere. A manned space capsule coming in from the moon would enter the atmosphere at 36,000 feet per second, causing the protective heat shield to reach a surface temperature of 6,000° F. This is twice the temperature endured by the shield of the Mercury capsules that orbited the earth. But heat is not the only reentry hazard.

There is the danger of a spacecraft not coming in at the proper angle. This angle is an imaginary corridor that is about 300 miles wide and 40 miles deep. If the men returning from a moon trip, for example, miss this angle and come in on one that is too shallow, they will skip out of the atmosphere and go off into space again. On the other hand, if the angle of descent is too steep, they will decelerate too quickly and be crushed by an unendurable pressure that will be 350 times that of Earth's gravity. Their lives depend upon making the angle of approach just right.

The ultrahigh vacuum of space is a deadly thing to man, causing body fluids to boil and the pressure of internal gases to rupture the body. Cell tissue itself appears to evaporate in it. So if a pressure suit is punctured while a man is walking about the moon or a space capsule is penetrated by a speeding meteor, death will come in seconds.

Failure of equipment is a grave hazard that even the most meticulous care in assembling cannot always prevent, as has already been revealed. It could leave the men in a spacecraft stranded on the moon or out in space, and there are no spare parts out there. A mere fingerprint on a surface to be welded during the construction of a spacecraft could cause failure of the weld.

A breakdown in radio communication with Earth and in navigational equipment would be disastrous for a spacecraft millions of miles out in space. The possibility of getting lost out there is much greater than on Earth. A space traveler trying to return to Earth must be able to locate the earth's orbit in the vast reaches of space and must also time the craft's arrival so that it reaches a spot in that orbit at the same time the earth does. If the timing is wrong, he will miss the earth and go into orbit around the sun.

Radiation is a space hazard that cannot be ignored even though instrumented space probes have indicated that it is not generally at a dangerous level. The greatest danger from it seems to be while passing through the Van Allen radiation belts around the earth and when encountering unexpected eruptions from the sun that fling streams of high-speed, energetic particles into space.

Being in a state of weightlessness over a prolonged period of time, as is necessary in space flights, appears to be a very grave hazard to man. So serious is it that it might prevent man from personally exploring this new frontier in the time period he plans. Prolonged weightlessness, like staying in bed for a long time, can cause a deterioration of the muscles, bones and circulatory system. A softening of the skeletal structure is likely because of a loss of calcium and other minerals from the bones. It is even feared that minerals will be lost that are necessary for the nervous and electrical processes of the body. Some persons believe that it will so seriously affect a man's sensory apparatus that what he sees and hears will be unreliable and that he will be subject to illusions. It is also responsible for an excessive loss of body fluids.

Even cell division appears to be upset by weightlessness. Checking on this, the Russian cosmonaut, Col. Bykovsky, performed an experiment during his orbital flight by halting the growth, every few hours, of the rapidly formed buds of the plant *Tradescantia paludosa*. Studies of this plant afterward revealed that the cells that di-

vided while the plant was in a state of weightlessness were imperfectly formed. This would become particularly noticeable in man's body on long flights. Radiation also interferes with cell division. So with both affecting the body for a long time, the parts that depend upon a high rate of cell division in order to function properly, such as the lining of the intestines, could be seriously damaged.

The physiological and psychological distresses caused by a prolonged period of weightlessness, as well as by other stresses of space travel, could affect the intellectual capacity of man in space, bringing into question his usefulness there. Some form of artificial gravity appears to be essential to prevent serious upsets in his body. But spinning the capsule to create it by means of centrifugal force does not appear to be the answer. It would subject a man's body to different pressures because the parts farthest from the center of the spinning capsule would be going at a greater speed than other parts.

The hazards of manned space flight are very many and very great. They have a direct bearing on the future of space as a new frontier for man. Whether it will eventually open up to him and become such a frontier, as men of the world envision, only time can tell. But at present there is a more urgent task for him. Before trying to solve the great problems of manned space flight, it would be much wiser for him to concentrate his intellectual talents on this task—how to cope with his social problems of war, crime and hunger here on Earth.

Follow the Leader

● An observer once saw some 200 pelicans flying about twenty-five feet above the Blue Nile, each bird following the other. Suddenly the leader bounded upward but immediately resumed its course at the original altitude. Every bird following, upon reaching the spot where the leader jumped, did the same.

HOW happy the two Reading, Pennsylvania, parents were that the wife had safely borne twins, two baby boys! But their joy was to be short-lived. How so? Something went wrong with the boys' blood because of the Rh factor. Although both received complete changes of blood by transfusions, the twins did not improve but died at the end of eight weeks, within a day of each other.

What is this Rh factor? How does it cause infant mortality? What can be done to combat this threat?

When physicians first began to experiment with transfusing blood from one person to another they were unable to understand why some transfusions appeared to be successful whereas others resulted in fatal complications. Gradually they discovered that all blood is not the same; blood is not the simple fluid it appears to be; it has distinct characteristics. So they classified blood according to basic groups, such as "A," "B," "AB" and "O." Then more types were discovered and these were labeled "M," "N," "R," and so forth.

Still, at times blood transfusions resulted in certain unfavorable reactions in spite of doctors' recognizing the basic groups. Then through research done with the blood of Rhesus monkeys it was found that the blood of most persons has a certain factor similar to that discovered in these monkeys, for which reason it was termed the Rh factor. Those who had this factor were termed Rh positive; those who did not were termed Rh negative. Among Caucasians 85 percent, among Negroes 93 percent, and among Mongolians from 98 to 100 percent have Rh-positive blood.

The danger in childbirth exists when the blood of the father is Rh positive and that of the mother Rh negative. Because a fetus or unborn child has its own circulation separate and distinct from that of

COPING WITH THE RH THREAT IN CHILDBIRTH

its mother, it is possible for the child to have the Rh-positive blood of its father whereas the mother has Rh-negative blood. When this is the case it sometimes happens that some of the Rh-positive cells of the child escape into the circulation of the mother. The two being incompatible, the presence of Rh-positive cells in the mother's Rh-negative bloodstream causes antibodies to be formed to neutralize these invaders. This results in the mother's blood building up an immunity to Rh-positive cells. The trouble arises when these antibodies in the mother's blood get into the child's circulation, for they attack the child's Rh-positive red cells, destroying them. However, this happens only once in about fifteen times where the father is Rh positive and the mother Rh negative. Still this condition, termed erythroblastosis fetalis, is sufficiently frequent to be termed "a major cause of fetal loss as well as of certain cases of cerebral palsy."

However, rarely does the Rh factor represent a threat to the first child, unless the mother previously had an abortion or a blood transfusion. But the first pregnancy may sensitize the mother's blood so that the Rh factor would present a threat to the second child. Subsequent pregnancies are likely to increase that threat.

Because of this Rh threat to normal childbirth, there has been talk of laws be-

ing passed requiring all couples desiring to marry to take an Rh test first to make sure that their blood is compatible, both either Rh positive or Rh negative, and, if not, they would not be permitted to marry. So far nothing has come out of these proposals, and perhaps rightly so in view of the restriction of personal freedom involved compared with the number of actual cases of incompatibility.

What Can Be Done?

According to one of the leading world authorities on blood groups, "no practicable method has yet been devised for the prevention of isosensitization by pregnancy or to counteract it once it has occurred. Various claims that have been advanced in this regard have not withstood the test of critical analysis."—*Rh and Hr Blood Types*, A. S. Wiener (1954).

As for prevention of the Rh threat to childbirth, according to medical journals some parents have accomplished this by means of artificial insemination, semen being provided by an Rh-negative donor. However, for Christians this is tantamount to adultery and therefore cannot be countenanced by them.

Then there are reports of prevention having been realized by means of the use of Rh-positive haptens. These haptens are a blood fraction taken from Rh-positive red cells and given orally or by injection to a woman whose blood shows a high degree or titer of immunization to the Rh factor. In one to four months the titer is down to zero, at which time a pregnancy is recommended. Upon conception treatment is resumed. Those using this method have reported perfect results. However, this involves the use of blood fractions, which is objectionable on Scriptural grounds.

A method that might be said to provide at least partial prevention is for parents

to arrange to let three or four years elapse between pregnancies where there is the Rh threat. However, pregnancies do not always wait for a schedule and, besides, this method can at best provide only partial prevention.

The most common recourse of doctors is to blood transfusion. It is quite a complicated procedure and not every hospital has qualified personnel to take care of such. Furthermore, time and again it does not successfully cope with the threat, for deaths keep occurring in spite of blood transfusions. In some cases blood has even been injected into the child before birth. Of course, the use of blood for transfusions is unacceptable to those who obey God's law as set out in the Bible at Acts 15:19, 20.

A method that is being used more and more in coping with the Rh threat to childbirth, both with and without blood transfusions, is "preterm delivery." By artificially inducing labor so that the child is born at the end of thirty-seven weeks instead of at the usual forty weeks, physicians have been able to report an improvement in survival of Rh babies. For especially serious cases, as when the mother lost a previous child because of the Rh factor, physicians have even delivered the baby from four to six weeks before the regular time and by this means have increased the survival rate from 10 to more than 50 percent. Of course, in such cases the physician must recognize that there is also the possibility of losing the child because of the extreme prematurity of its birth.

In addition to the foregoing there is what might be called the constitutional approach to this Rh threat to childbirth. This is based on the fact that in only one in fifteen cases does the mother become sensitized and that therefore the problem might be likened to an allergy. Concerning this, Wiener says: "The inordinately high

proportion of instances of multiple sensitization actually encountered further supports the thesis that the constitution of the individual is decisive."

This raises the question as to what distinguishes the constitution of Rh-negative mothers who form antibodies when carrying an Rh-positive fetus from those who do not. It appears that it is the fragility of the mother's capillaries that allows the Rh-positive cells of the fetus to enter her circulation, where they cause antibodies to be formed. Is there something that can be done to make the mother's capillaries less fragile? Yes, there has been considerable experimenting done in recent years by at least one surgeon with a citrus bioflavonoid compound, made from orange pulp and rinds. Where the Rh threat exists, this has been given to mothers in the form of CVP early in pregnancy, 400 to 600 milligrams daily and continuing until delivery. In one hospital where a careful record was kept of those being given this compound and those not, it was found that, whereas preterm delivery and blood transfusions resulted in the saving of only 30.9 percent of the babies, where CVP was added the result was a saving of 75 percent of them. In spite of these striking results, in which upward of one hundred infants were involved, the surgeon pioneering this type of treatment cautions that it would be presumptuous to forecast a cure-all, since a

much larger number of patients would need to be treated before definite conclusions could be reached.—*Surgery, Gynecology and Obstetrics*, August 1956, January 1960.

Still others tell of marked improvement in coping with the Rh threat to childbirth by use of vitamins B, C and K and an iron solution such as Fer-in-sol, these being given the infant after birth. No doubt methods such as this and the foregoing one would receive far more attention than they do were it not that many have placed such great faith in blood transfusions—more than the success of this method would appear to merit.

No question about it, at times the Rh factor does present a real threat in childbirth. However, in view of the foregoing it appears that to insist on blood transfusions to the extent of obtaining a court order to override the religious scruples of parents against such a procedure is an abuse of medical authority in more ways than one. Where parents who have such scruples are faced with this threat it may well be the course of wisdom to make the necessary arrangements to have the child born at home. While this is no longer the general practice in some places, it is interesting to note that the vast majority of babies are born at home in the ten countries that have a better survival record than the United States, where 97 percent are born in hospitals.

UNITED BY THE SAME HOPE

In Caixias, in the State of Maranhão, Brazil, one of Jehovah's witnesses overcame an objection raised by a lady's father and began a Bible study with her.

"One day," related the Witness, "the lady told me that her husband had arrived from Brasília and that I should not say anything to him, so as not to upset him. She asked me to conduct the study without letting him know. But when the opportunity to talk to him presented itself, I took courage and conducted the study in his presence. At a certain point, he smiled at his wife and said that he had this same hope in his heart, but that he did not have the courage to tell her. He fetched his copies of the Watch Tower Society's publications, saying that he also had studied in Brasília. Despite great efforts on the part of religious opposers to turn them from the Bible's truth, they are now unitedly praising Jehovah."

Let Your Land Cut the Cost of Living



FOR most families, food is the biggest item in their budget, and it grows bigger as the cost of living continues to rise. Reducing the food bill is their desire, and this can be done substantially if a family has some land around the home. In fact, even small yards can be surprisingly helpful in lowering food costs.

No matter how small a backyard may be, a few vegetables can be grown there. Even the front yard can be made to produce food and still be attractive. In the place of ornamental shrubs, bush cherries can be planted that will produce many quarts of cherries suitable for pies, preserves and canning. If the bushes are put in close rows, they form a fine hedge that can be trimmed to whatever height is desired.

Dwarf fruit trees can take the place of unproductive ornamental shrubs. A dwarf apple, for example, may grow no higher than six or eight feet and will produce apples of normal size. By means of grafting, one tree can produce several varieties of apples. Even flower borders can be attractive food producers.

Strawberry plants make fine borders for walkways and flower beds, producing not only delicate blossoms but an abundance of delicious fruit. Herbs used for seasoning food also look good as flower borders. The sage plant has silvery leaves and blue flowers, thyme has tiny white flowers, and burnet has attractive sprays of oval leaves. A double row of Bibb lettuce looks nice

along a brick walk and is delicious in a salad. Behind low-growing flowers can be planted a few tomato plants. The flowers will hide the lower part of the stalks that lack eye appeal. Even some flowers can be used as food.

Rosebud petals, nasturtium leaves and blooms and marigold petals can be used in salads. Also, young dandelions that grow up in the lawn make nutritious salads. Peony seeds are good for seasoning food and the fiddlehead of ferns can be used in the spring, when they are young, as a delicious substitute for asparagus.

In place of a large, rambling hedge along the property line, a person could plant blueberries, raspberries and Rosa Rugosa. From the berry bushes the family can get many quarts of berries, some of which can be eaten fresh, others canned and still others made into jam. The Rosa Rugosa becomes a thick hedge with attractive blossoms during the summer. After the blossoms fall off, a fruit forms that is known as rose hips. These are a rich source of vitamin C for the family. A quarter of a pound of rose hips is said to be equivalent in vitamin C content to 120 oranges.

Planning an Acre

Planning can make the small front- and backyards of a suburban home productive of nourishing food for the hungry mouths of a family, and an acre of land can be transformed into a food source that can

cut the family food bill by hundreds of dollars a year. In many places, fruits, vegetables, herbs, rabbits, honey, chickens and eggs can be produced on it to supply much of the family's needs for a year. What is in excess can be sold or traded with neighbors. Besides cutting down on the cost of living, the fruits and vegetables will be much tastier than those usually sold in a market, because they are fresh and can be allowed to ripen before being picked.

Three sides of the acre can be bordered with dwarf fruit trees and various kinds of berry bushes. Besides apple trees, there are dwarf peach, plum and pear trees that produce generously in normal-size fruit. Being small, the trees can be easily pruned and sprayed. An effective nonpoisonous spray for fruit trees is a mixture of light-grade oil, fish-oil soap and water. It must be applied while the trees are dormant. The oil makes a continuous film over insect eggs and hibernating scales and kills them. It has been successfully used against many chewing and sucking insects.

The size of the vegetable garden should be planned so as to meet the needs of the family, not that of the neighborhood. It is very easy to grow more than one family can consume. Estimates have been made that a vegetable garden of around 25 feet by 40 feet can feed one adult person for a year. On this basis a family can plan the garden size that fits their needs best. Such a garden, of course, must be intensively cultivated.

After a plot of land has been used for a vegetable garden, a cover crop should be planted on it in the fall so as to put nitrogen back into the soil. Soy beans, vetch or any other legume does this. The cover crop could be a mixture of winter rye and vetch. When the crop is turned under the following spring, it will rot quickly, adding organic matter to the soil, and during the winter it will protect the soil from erosion.

Also, the same vegetable should not be planted in the same part of the garden plot year after year. It should be in different locations for three years before being planted in the place it had during the first year.

Making a Productive Garden

It is one thing to put in a garden, but another thing to make it productive. Much has to be done with the soil of a garden to get good production. It needs to be spaded deeply, fertilized and mulched. If it is acid, lime that is suitable for plants has to be spread on the ground to neutralize the acidity. Damaging insects and diseases must be fought, and good water drainage must be maintained so that ground water does not come up into the root zone and sour the soil as well as leave damaging salts on the surface.

Irrigation water should be available even in localities where there usually is enough rain for growing crops. Because rain does not always fall when it is needed, irrigation can keep a garden flourishing during dry spells. In fact, irrigation can mean a 100-percent increase in the crops over what would be obtained by depending upon rain. In a period of ten years, there are, in many localities, only one or two years that will have enough rain during the growing season to make irrigation unnecessary.

Plenty of humus on the garden does much to stimulate good plant growth, as it provides nutrients, helps the rain to soak in, lets air into the soil, keeps the soil moist, gives it a good texture and encourages the growth of soil bacteria that are vital to plant health. It has been estimated that a pound of decomposed sawdust or compost can help to put a square foot of exhausted garden soil into fairly good condition. A two-inch mulch of wood chips, sawdust or hay is excellent for a garden.

Compost consists of decayed vegetable matter that gives the soil the nutrients that growing plants take out. It, therefore, results in a productive garden. A spot should be set aside where a compost heap can be built up. There grass cuttings, leaves, weeds, the stalks of vegetable plants that have finished producing, vegetable garbage from the kitchen, seaweed (which is rich in trace elements), and any other vegetable matter can be added to the compost. The heap should be about four feet wide and four feet high. Its length can be whatever is desired.

Each layer of a compost heap should be about six or eight inches thick. Before beginning the next layer cover it with an inch of topsoil. Any manure, such as from rabbits and chickens, as well as fine coal ashes or wood ashes can be put between the layers of vegetable matter. When about four feet high, cap the heap with two inches of soil. Keep it moist but not soggy. If you build the compost into a heap rather than putting it in a pit, fresh air will be able to get at it, and this is important to the growth of aerobic bacteria. In three or four months the compost heap should be ready for use on the garden. In the meantime, another heap can be started.

Because a mulch cuts sunlight from weeds, the unpleasant task of keeping weeds from the garden is practically eliminated. The soil is kept moist and cool. Rain that falls on the garden does not cake the surface of the soil and run off but soaks into the mulch and into the ground. The mulch then prevents the sun from evaporating the moisture.

Timing the planting of vegetables is another factor important to good production. This means to take into consideration the number of days required for a plant to mature. When that is done, the planting of rows of one type of vegetable can be

spaced over two-week intervals so that they will not all ripen at one time. Since some plants take longer to mature than others, companionate crops can be planted. This is done by planting long growers and short growers in the same row and at the same time. The short growers will be finished by the time the long growers will need the space. Leeks, for instance, can be planted with lettuce, and by the time the leeks need more growing space the lettuce will have been eaten by the family. As soon as vegetables that are planted alone are fully matured, they can be harvested and the soil prepared for another vegetable. This will prevent the soil from becoming idle and unproductive during the growing season.

Controlling disease and insects is a constant problem in a garden. Some persons strive to do it by means of poisonous chemicals, but others believe that these are damaging to wildlife, dangerous to those who apply them and injurious to those who eat the fruit and vegetables on which the sprays are used. There are gardeners that have successfully grown fruits and vegetables of fine quality without using chemical sprays.

Cutworms can be kept from young cabbage and tomato plants by means of tarpaper disks and stiff paper collars that are put around the plants. A way to fight maggots as well as many other garden pests is to use wood ashes. Ashes sprinkled along the rows and around the plants discourage flies from laying their eggs there. The ashes also appear to be good for fighting bean beetles, aphids, club root, scab on beets and tree borers. A quarter of a teaspoon of white mineral oil injected into the tip of each ear of corn after the silk wilts has been found to prevent earworms. Encouraging birds in the garden also helps to fight insect pests. These are some of

the methods used to fight insects by persons who try to avoid chemical sprays. But each individual must decide for himself what method he will use to combat pests and disease.

Other Foods

More than fruits, berries and vegetables can be raised on an acre of land. Two or three dozen hens are a big help in cutting food costs. They can supply eggs for the family as well as meat. But purebred, healthy pullets that have an ancestry noted for high production should be chosen when starting the hen house. A flock of just fifteen of these birds should produce about five dozen eggs a week if an artificial lighting system is used to make them work longer. Excess eggs can be broken and their contents frozen.

Since egg production will begin to drop for a hen during her second season, it is advisable to slaughter her after that season. Slaughtered hens, and the pullets that some of the hens can be allowed to raise from chicks, can help cut down on the family's meat bill. Some of the slaughtered chickens can be frozen for use at a later time.

With about four square feet of floor space for each bird plus the chicken yard or run, the space taken by the chickens will not be excessive. If the chicken run has a honey locust tree and a New American mulberry tree in it, there can be a saving in feed costs. During June and July the berries of the mulberry will help feed the birds. They also can be used by the family, as they are good for human consumption. In the fall the large, sweet pods from the locust tree will drop to the ground for the benefit of the chickens. Some of the pods can be gathered for feeding the chickens during early winter. If there is an oak tree in the front yard of the house,

the acorns from it can be dried and shelled for the chickens. They can supply half of the diet of the chickens for a large part of the winter, giving a person another saving on the cost of feeding the birds. In fact, it would be good to have a nut tree of some kind for the family.

A few rabbits can be another source of meat that does not require much care. Their manure will be a valuable addition to the compost pile.

It is not possible to keep a cow on only an acre of land, but those persons that have more than an acre, making pasture land available, would do well to have a cow. It can bring big savings on food costs. One American family that has a cow estimates that they save about \$500 a year on the milk used for drinking. An additional saving comes from the butter and cheese they are able to make. A yearly calf aids greatly in reducing the meat bill.

Not to be overlooked are a few bees to supply the family with healthful honey, a natural sweetener. Three or four hives require only about an hour or two of care once a week from spring to fall. Besides honey, the bees will give a family a larger crop of fruit, melons, squash, and so forth. By reading a few books on bees an inexperienced person can quickly learn how to handle and care for them.

Although the cost of living is high and continues to rise, it is possible for a family to reduce that cost by making use of the land it has. Since time and hard work are necessary to get the most from a piece of land, a careful scheduling of time is necessary to prevent the garden from encroaching upon time that should be spent on other things such as spiritual matters. The reward for the labor put on the land, however, will be a substantial lowering of a family's cost of living.

Could you live at a HIGH ALTITUDE?



By "Awake!" correspondent in Bolivia

MANY times when flying high above the earth in an airplane I wondered what it would be like to open a window and take a breath of fresh air at that height. Now I was about to find out. At La Paz airport in Bolivia, at an elevation of 13,358 feet, planes land at an altitude at which many fly.

Strange thoughts passed through my mind. Will I be able to breathe? Will I be able to work in such a high altitude? Will I become accustomed to the altitude after a while?

Arrival

What a surprise as I stepped off the plane! I noticed no immediate difference, no lack of energy; I was breathing normally. Most noticeable, however, was the cold, and I soon found out that it is always cold at this altitude. "Perhaps," I thought to myself, "I'm just one who can adjust to the altitude easily."

La Paz, one of the highest cities in the world, with an average elevation of 12,000 feet, is below the airport in a gigantic basin. Taking an auto, we traveled for about thirty minutes down a steep road that snakes its way toward the city. As we approached La Paz, I was feeling calm at having weathered the altitude so well. Arriving at the home where we would be guests for a few days, however, I felt my first effect of the altitude. My foot suddenly became very heavy as I tried to mount the stairs at my usual pace. By the time I reached the top of the stairs I felt as if my head were moving in circles. A chair in the entrance hall looked very inviting. My condition must have been quite noticeable, for someone consolingly asked, "Feeling the altitude?" I guess I was.

Soon we were seated at the dinner table. I was astonished and ashamed at my appetite, which had increased considerably. This, I found out, too, is to be expected. As the body must expend more energy, it naturally needs more food for fuel to convert into energy.

Since one friend had told me he always got a terrible headache in the altitude, I was expecting to get one too. Fortunately, I never did. Many do, however, and this is sometimes due to the lower atmospheric pressures one encounters. For every 900 feet of elevation above sea level there is a pressure difference registering approximately one inch on a mercury barometer. The relative blood pressure in the body increases, since the exterior pressure is lower. This greater relative pressure within the body, some feel, may be the cause of a sudden headache in the altitude. It may also account for the fact that irritableness is a symptom of "altitude sickness." So some famous mountain climbers of the

Andes eat large amounts of garlic and onions on their climbs to lower their blood pressure.

Knowing now that I was not immune to the effects of altitude, I walked noticeably slower. Mounting the stairs to the second floor became a major task. As I watched others going about their duties with energy that I didn't feel, I wondered if perhaps they had once felt as I did. "Certainly," they reassured me, "but it will pass. The number of red cells in your blood will increase, and you will breathe faster to compensate for the thinness of the air."

A few days later a friend and I ventured out to shop in the downtown section of La Paz. From its high edge this city, dating from the Spanish colonization, flows down and around the precipitous irregular conformations of the great basin, part valley, part canyon, reminding one of a cake mix clinging to the sides of a mixing bowl. Consequently one is generally going either uphill or downhill. Trudging up a rather steep incline, breathing heavily, we heard the footsteps of someone behind us walking at a brisk pace. Expecting to see a small child, we were astonished to see a rather elderly woman, a native Indian, carrying her traditional pack on her back. She was soon far ahead of us, seemingly with no effort at all.

Effects of Sun

Although the air temperatures generally go down when altitude goes up, I found it almost always warm in the direct light of the sun. Sunburned faces with their peeling noses can be seen here all year round. This is due to the intensity of the sun's ultraviolet rays, which are not filtered out in the thin air to the extent they are at lower altitudes. Being accustomed to a skin that always tanned instead of burned, I was surprised to note that after a few days I too was sporting a peeling nose.

The sun takes its toll in clothing as well at this altitude. Dark colors are specially susceptible, gradually becoming bleached under the intense sun. I find my light-colored clothing maintaining its color while the darker pieces require dyeing now and then. Anything in the house that is repeatedly exposed to the sunlight, such as draperies or curtains, must be heavily lined to prevent discoloring.

Effects on Cooking

Planning a meal may require adjustments. I wondered why many foods needed more cooking time. Consulting a cookbook, I found that this expression stood out: "Boiling water's not so hot, way up on the mountaintop." Water boils at 212 degrees Fahrenheit at sea level, and after that the boiling point drops approximately one degree for every 500 feet above it. Thus at 13,000 feet water boils at about 186 degrees instead of 212. This affects the cooking time for boiled foods such as stews, vegetables, and so forth. It also explained why my coffee seemed to cool more rapidly. It wasn't as hot to begin with. With the aid of a pressure cooker, however, I have learned to overcome the cooking problems. In fact, I find myself preparing a meal in a shorter time than before.

Baking a cake at this altitude is a challenge even to a good cook. Cake doughs seem to defy all rules, as the cake ingredients must be adjusted to suit not only the altitude but the locality as well. One learns to apply his own rules by experimenting. After talking with others who have lived at this altitude many years, I learned to decrease the amount of sugar, and this helped immeasurably. But up here one can never predict exactly what a cake may do.

To bake a cake one may even have a problem if the oven has a kerosene burner

requiring lighting. Trying to keep a flame lit at 13,000 feet, I found, was a little frustrating. Due to the lack of oxygen in the air the flame quickly dies out. But with practice and patience and a little blowing to add oxygen this soon becomes no problem at all.

Generally, if you see a can of food that bulges before you open it you think the contents are spoiled. But this is not necessarily true in the high altitudes. I discovered, to my surprise, however, that one must be careful when opening the can, as the greater pressure within sometimes causes the liquid to squirt out rapidly. The first time I opened a can of tomato sauce a good portion of its contents ended up on the kitchen wall.

Decreased Vapor Pressure

Anyone who has lived in the tropics knows how difficult it is to dry clothes. But that problem is rarely encountered at high altitudes. Due to the decreased vapor pressure, liquids evaporate more rapidly. Hence, I find myself putting clothes out to

dry before lunch and taking them in quite dry right after lunch.

Hot, muggy days are a rarity too, due to the rapid evaporation of the water. And since evaporation takes heat with it, I find it refreshingly cool almost all year round.

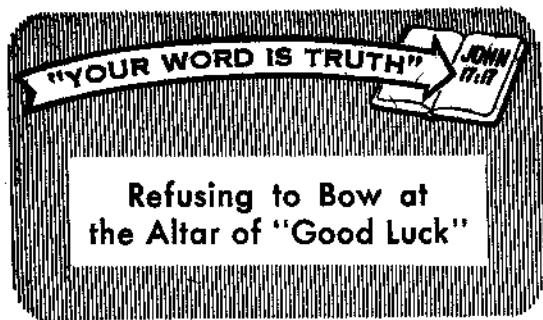
Looking out my window, I have noticed that during a light rain the street is wet, but with intermittent dry spots. Wherever a tree prevents the rain from hitting the ground directly, it remains completely dry, although all around such spots the street is wet. The rain evaporates almost as fast as it falls, so that some spots never do become wet. Of course, if the rain is quite heavy, this does not occur.

Adjusting to the high altitude has been an interesting experience as well as a challenging one. Trying to understand the reasons behind the differences one encounters can prove fascinating as well. Every time I look out at the snow-covered mountains surrounding this area I feel very fortunate indeed to have so much beauty so close at hand. After all, how many places are there where one can live so close to the clouds?

Quake Throws Bodies out of Tombs

● A newspaper report in the July 31, 1962, issue of *El Tiempo*, of Bogotá, Colombia, says: "SONSON, 30. Two hundred corpses in the cemetery of this town were thrown out of their tombs by the violent earth tremor in which nearly all the crypts lay open, giving the burial grounds a gruesome appearance. When the excitement among the citizens began to settle down, reports were received in town as to the damage caused by the quake in the cemetery and many were the persons who went there with the purpose of reburying their relatives, whose decayed bodies in many cases had been thrown several meters away. The gravestones of many of the crypts broke loose exposing decayed coffins to the visitors who rapidly undertook the corresponding task of covering them up."

Such an incident well illustrates what can happen to cemeteries during an earthquake and also throws light on what happened at the time of the death of Jesus Christ: "The earth quaked, and the rock-masses were split. And the memorial tombs were opened and many bodies of the holy ones that had fallen asleep were raised up, (and persons, coming out from among the memorial tombs after his being raised up, entered into the holy city,) and they became visible to many people." (Matt. 27:51-53) These verses do not describe a resurrection of sleeping holy ones but merely a throwing of bodies out of their tombs by the earthquake that took place at Jesus' death. The bodies, as in the case of the earthquake in Colombia, were seen by many people.



DO YOU worship at the shrine of "Good Luck," or do you practice any of the rites peculiar to that form of worship? Many persons do, without even realizing it. Numerous medieval superstitions of our ancestors are still in vogue today. Some persons still consider it unwise to walk under a ladder, apart entirely from the physical danger involved. And have you noticed that there is no thirteenth floor and no room of that number in ever so many hotels and hospitals? In many homes, to break a mirror is considered a tragedy, for it is supposed to mean seven years of bad luck for the family.

The ancient custom of wearing, suspended from the neck, a charm box containing some mystical prayer or a relic or some precious stone thought to have power to ward off the "evil eye" may seem to you a bit childish. But what about modern fetishes? Many persons today wear a safety medal, or a rabbit's foot, or carry around in purse or pocket an old coin or a pebble of odd shape or color. How carefully they guard their talisman! And how concerned they are when it has been mislaid or left behind!

In Africa the fetish may consist of bladders of fowl or the blown-up intestines of sheep. When blessed by the medicine man, these things are believed to protect the owner from unseen dangers. In modern Thailand it is rare to find a child whose

parents have not supplied it with a charm, duly blessed by a monk, enjoining some particular spirit to guard the wearer against evil. In Europe and America the charm may take the form of a foxtail or a pair of dice displayed in the home or the automobile. By the way, in the folklore of England it was believed that witches often materialized in the shape of a fox.

Even the sophisticated youth of today are concerned about such items as birthstones, "good luck" pieces and other supposed guardians of security. Toward such believers in luck are directed numerous advertisements in the pulp magazines, such as one extolling "a necklace of bright blue glazed lava beads, worn by Iranian donkeys—and babies—to ward off the evil eye." Then there is the ad recommending the Good Luck Troll, one of "the little magic fellows from Scandinavia" whose job it is to bring "good luck" to his owner. Also, there is the Tiki necklace, so called after the god Tiki of the Pacific Islanders. And at the entrances of many homes around the world today may be seen charms of various kinds that are admittedly for the purpose of protecting the household from evil.

To each one who carries or displays one of these charms a few pertinent questions might well be directed. Has your charm really exempted you from misfortune and trouble? Has your household proved to be more fortunate, more successful than others where no such superstition is entertained? Do you really have faith in the power of your fetish to do good? Or do you think that your charm is representative of some invisible power?

Perhaps you are not sure, but you just hold on to the charm in case there is something to it after all. But why not be sure? You can be by just putting your charm to the test. If it is really so powerful or if it

is backed by some real invisible power, will it be able to save itself or will the unseen power backing it intervene to save the charm or fetish if you throw it in the fire or the river?

On the other hand, you may be quite sure your charm is really powerless, but you have just fallen into what you like to think of as a harmless, popular custom. But have you considered the possible effect on others as a result of your adopting such a custom? Perhaps, without being aware of it, you have identified yourself with that superstitious kind of thinking that is so prevalent today. You may have even influenced others to worship at the altar of "Good Luck," since they cannot always know that the charm you display really means nothing to you.

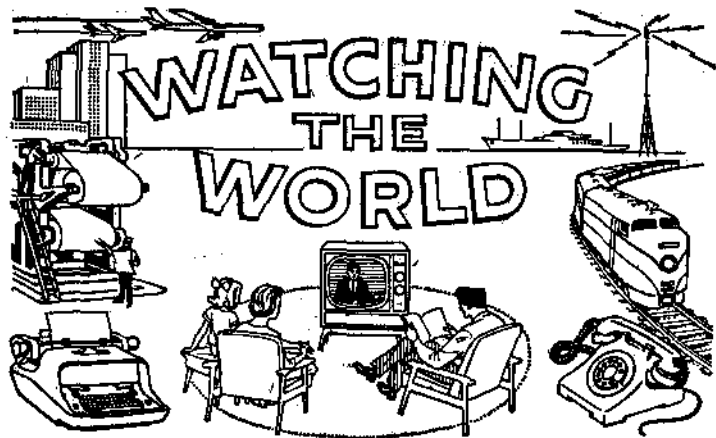
Again, you may feel that since some religious priest or medicine man has blessed your fetish, it is sure to confer some kind of "holy" protection upon you. However, if any kind of superhuman power is conveyed through such an article it certainly does not emanate from the true God, for in his written Word, the Bible, he condemns all kinds of magical practices. People who embraced Christianity in the first century of our Common Era realized this, and they promptly disposed of those of their possessions that were related to magical arts.—Acts 19:18, 19.

The Bible does indeed teach that there are mighty invisible forces, bad and good. However, man's protection from the evil powers does not rest in either magical or material armor. The genuine armor that can guard against attacks by superhuman foes is revealed in the written Word of God. Note the counsel of the apostle Paul: "Put on the complete suit of armor from God that you may be able to stand firm against the machinations of the Devil; because we have a fight, not against blood

and flesh, but against . . . wicked spirit forces in the heavenly places. . . . Above all things, take up the large shield of faith, . . . accept the helmet of salvation, and the sword of the spirit, that is, God's word." (Eph. 6:10-17) Success and security are attained only by following this inspired advice.

Once convinced of the uselessness of magical charms, what will you do? The easy way is just to drift along with the crowd, doing what others do. But that course gives the wrong impression and so is dishonest. What proper motive could there be in acting out a lie, in misleading others? It is like a ship sailing under false colors for some deceptive purpose.

Whatever may have been your reason for becoming involved with the objects of "Luck" worship, there is good reason for you to settle your mind on the subject once for all. You want to be relieved of the uncertainties and doubts and fears that superstition engenders. You do not want to be one of those who 'exchange the truth of God for the lie and venerate the creation rather than the Creator,' who 'set in order a table for the god of Good Luck and fill up mixed wine to the god of Destiny.' You want to be able to look to the true Source of safety and success with confidence. And certainly you do not want to be instrumental in stumbling others into believing in superstitious charms and magical powers. You do not want observers to get the idea that you are a worshiper at the altar of "Good Luck." Rather, if you are a believer in God and his written Word, you want people to know that you have nothing in common with such superstitions. Like Joshua of old, then, declare plainly by your course of action: "As for me and my household, we shall serve Jehovah." —Rom. 1:25; Isa. 65:11; Josh. 24:15.



A Grim Reminder

◆ War is never pleasant, whether it is fought in Vietnam or in the Congo or any other place in the world. Too often young men die for causes they know little about. Korea, for example, haunts America. It is the first major war that she never won. That blood-soaked conflict lasted 3 years and 32 days—just 114 days short of American participation in World War II, the war against Nazi tyranny. In Korea the United States suffered 137,000 casualties in dead, wounded and missing. A million non-combatants were killed and nearly four million made homeless. The truce plan left the war about where it started, and few people today really know why that conflict was fought. Eleven months after this stalemate, a China-backed war against France was won, to the shock of the Western powers. The French Union forces numbered about 250,000, plus 300,000 in the armies of Vietnam, Laos and Cambodia, a total of about 550,000. The killed, wounded and missing of all these forces totaled 172,000 to 206,000. With that loss the seventy years of French rule over Indochina ended. How many people today know why that war was fought? Algerian forces not long ago prevailed over the French, though they were outnumbered more than

twenty to one. Now Americans are faced with a similar war in South Vietnam. With deepening involvement of the U.S. in that conflict, the insistent question by Americans everywhere is: "What are we doing out there in Vietnam anyway?"

Priests Demand Pay Rise

◆ Jesus Christ preached freely, without a pay check, but the Greek Orthodox clergymen will tell you that was quite a few years ago. A published Associated Press account says that the Greek priests were promised a raise in pay by Premier George Papandreu. Priests in small villages of more than 1,500 population will get a 500-drachmae increase in their pay, which now averages 1,000 drachmae a month. The priests, numbering about 150, had threatened to resign, the report stated, if their pay was not increased.

Flourishing Science

◆ Since World War II science has flourished in America as never before in its history. President Johnson of the United States stated that science holds out hope for solving many age-old problems. Americans can look to science, he said, "for the technology and industry which will supply us with the new products and new jobs to meet our needs. For

the health programs which will eventually conquer disease and disability. For the purposeful and useful exploration of the seas around us and the space above us. And, most especially, for the guidance that will permit us to proceed with greater security and great confidence toward our goals of peace and justice in a free world." Lest we forget, let us be reminded that science has also given mankind scientific missiles, with scientific nuclear warheads that have placed the earth on the verge of disaster. Science has also polluted rivers, the atmosphere and the land with radioactive fallout. Even the mind is not free from the bombardment of a scientifically conducted cold war. Science is flourishing, but it is not all for man's betterment.

Africa Today

◆ Africa's fledgling nations are already flexing their military muscles. They have become aware of their dependence on the military. The weak ones have a thirst for strength, but the cost burden is shockingly high. A published Associated Press dispatch, dated February 2, stated: "Independent Africa with a per capita income of \$122 yearly, supports some 400,000 armed men grouped in 35 armies. . . . Total estimated military budget of the independent African nations, without South Africa, is close to \$800,000,000." There have been dozens of uprisings in the last four years. Assassinations and attempted assassinations are forever a threat. In East and West Africa military revolts have rocked new nations. Many governments have decided that the best possible formula for survival is to collaborate closely with the military. Much of Africa today is independent, but truly not happy or free.

Cure for Homosexuals

◆ The Bible has contended for centuries that moral pervers-

sions can be cured if the patient is willing. Increasingly more modern therapists are beginning to agree. One reason why homosexuals are so rarely cured today, said Dr. Samuel B. Hadden of Philadelphia, is that they rarely try treatment. Too many of them think they are happy and satisfied the way they are. That is why they do not change, the doctor said. Many psychiatrists who try to aid homosexuals, Hadden said, fail in their endeavors because they have no confidence in their success. Male homosexuals, he concluded, are more treatable and curable than is generally believed. What is mainly needed is an understanding attitude toward the patient and confidence that the illness can be successfully treated.

Dial 999

◆ Londoners dial 999 when they want police assistance. What number must you call if you want the police to come to your aid? It is a good thing to know in these days of crime and violence. For each London call there is a form filled out. The stack is growing at an alarming rate. There were more than a million calls made last year. In 1938 there were only 47,000. Only one out of four crimes in the London area is solved. The national average is one in two.

Unchurched People

◆ How many people belong to some religious organization in America? One might be inclined to say 'almost all.' But the truth is that some 66,000,000 Americans, that is, 36.4 percent of the entire population, do not belong to any church, nor are they claimed by any religious organization. This figure is even more astonishing when we remember that Roman Catholics, for example, count as members not simply those who go to church but anyone who was baptized,

or who ever belonged to the group, even though he may never have attended or contributed since.

Snow in Rome

◆ The normal city life of Rome, Italy, came to a sudden halt on February 9, when over a foot of snow fell, clogging its streets. Hundreds of motorists were stranded and traffic became snarled, a twisted mess. Some 5,000 calls for aid and minor injuries were reported. Many trees toppled from the weight of the snow. Damage throughout the city was estimated to be \$1,600,000. The storm was described as the worst in ten years.

Where Justice Is Slow

◆ In Selma, Alabama, justice is never represented as swift, especially so when dealing with the Civil Rights laws in recent years. In March 1961, the United States Attorney General ordered officials to speed up the registration of Negroes. Four years have passed and this is still a problem. Some folks feel that a voting referee will not be named until after July—maybe. Legal action to deprive Negroes of their vote began in Mississippi in 1880 and quickly spread across the southern states of America. Things are different now, but some folks are just slow in changing their minds. Selma, Alabama, has a voting-age population of 29,515, of which 14,000 are white and 15,115 are Negroes. As of the date of this report, 9,542 white persons and 335 Negroes have been registered as qualified voters in the county.

Canada's Highways

◆ By 1975 three out of every four Canadians will live in a city and every second Canadian will drive an automobile, so say submissions to the Royal Commission on Canada's Economic Prospects. Seventy percent of all driving will be done on city streets. Even to-

day, with 6,000,000 motor vehicles registered in Canada, and a ratio of 4.1 persons per car, practically the only people who walk any distance anymore are those who seek exercise. Canadian roads are described as painfully inadequate. A survey showed that in 15,998 reported accidents, 19,946 traffic violations were the contributory cause, and in some cases poor highways were to blame. Safe driving in Canada, as elsewhere, still depends very much on the driver, not the vehicle. Someone once said: "There were just as many careless drivers forty years ago, but the horse had more sense."

Crime in the Subways

◆ New York City once boasted that its subways were the safest in the world. That statement needs revision. The Transit Authority disclosed that major crimes rose by 52.5 percent last year in the city's subways. The number of major crimes in the city's subways, over the past five years, ran this way: 1960, 948; 1961, 939; 1962, 1,052; 1963, 1,119 and 1964, 1,707. Joseph E. O'Grady, chairman of the Transit Authority, said that the increased lawlessness in the subways merely reflects the rise of major crimes in the streets above. Perhaps one reason for the cause of the growing crime rate lies in the statement made by veteran police inspector Bernard Deloughary. The inspector said that he was "fed up with the lackadaisical attitude of the courts." "They let the hoods out faster than we can lock 'em up." For that reason he resigned.

Airline Tragedies

◆ An Eastern Air Lines plane plunged into the Atlantic Ocean on February 9 shortly after takeoff from Kennedy Airport in New York. All 84 passengers and crew perished. Initial investigations pointed to human falling as the cause of

the crash. In the Chilean Andes, army troops made a final search for an airline that crashed on February 6, killing all 87 persons aboard.

Weddings en Masse

◆ The regime in Cuba claims it has emancipated Cuba's women. For centuries, under the strict control of the Roman Catholic Church, many Cubans lived rather loose lives. A large number of Cubans lived together without being united in marriage, and still they were considered good Roman Catholics. In 1953, statistics showed that 35 percent of the population, which was then nearly 6,000,000, were married and 17 percent were living together without the benefit of legal marriage. The remainder were children and single persons. Cuba's population today exceeds 7,000,000. The number of couples living in common-law unions contin-

ues to be high. Recently government officials pressed to find out who the irregular couples were, and they were urged to get married. Some pressure appears to have been applied where children were involved. On February 14 the government sponsored a mass marriage to legalize the bonds between couples who had been living together without being formally married. In Havana about 400 couples were joined together. Some brought their children. Jehovah's witnesses were not included in the group, because they could not have become Witnesses without first bringing their lives in line with the Bible's standard on marriage.

War or Peace

◆ The term "peace on earth" has been tossed around for approximately 2,000 years by priest, politician and statesman alike. But perhaps at no time

has the phrase sounded more hollow when uttered by worldlings, and no wonder. According to the 1964 financial report, the United States Atomic Energy Commission has spent \$3,225,000,000 on developing, testing and producing nuclear weapons since 1958. In the same period, the Commission spent \$50,000,000 on peaceful uses of nuclear explosions.

Life in the Antarctic

◆ No one ever dreamed that a living creature would want to make the desolate Antarctic ice cap its home. But in an area only 309 miles from the South Pole a tiny living thing, about one one-hundredth of an inch long, was found alive, and, of all things, it is a spidery creature at that. The National Science Foundation stated that the discovery represents the southernmost point at which "any animal life is known to exist."

SECURITY

Freedom from fear, from want, from sickness, from war—these are the freedoms men seek. Desirable as they may be, however, freedom from ignorance is of more lasting benefit; freedom, that is, from ignorance of God's purpose. That is because knowledge of God, and of his Son whom he sent forth, is the way of life. That way means everlasting security. Learn God's way.

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