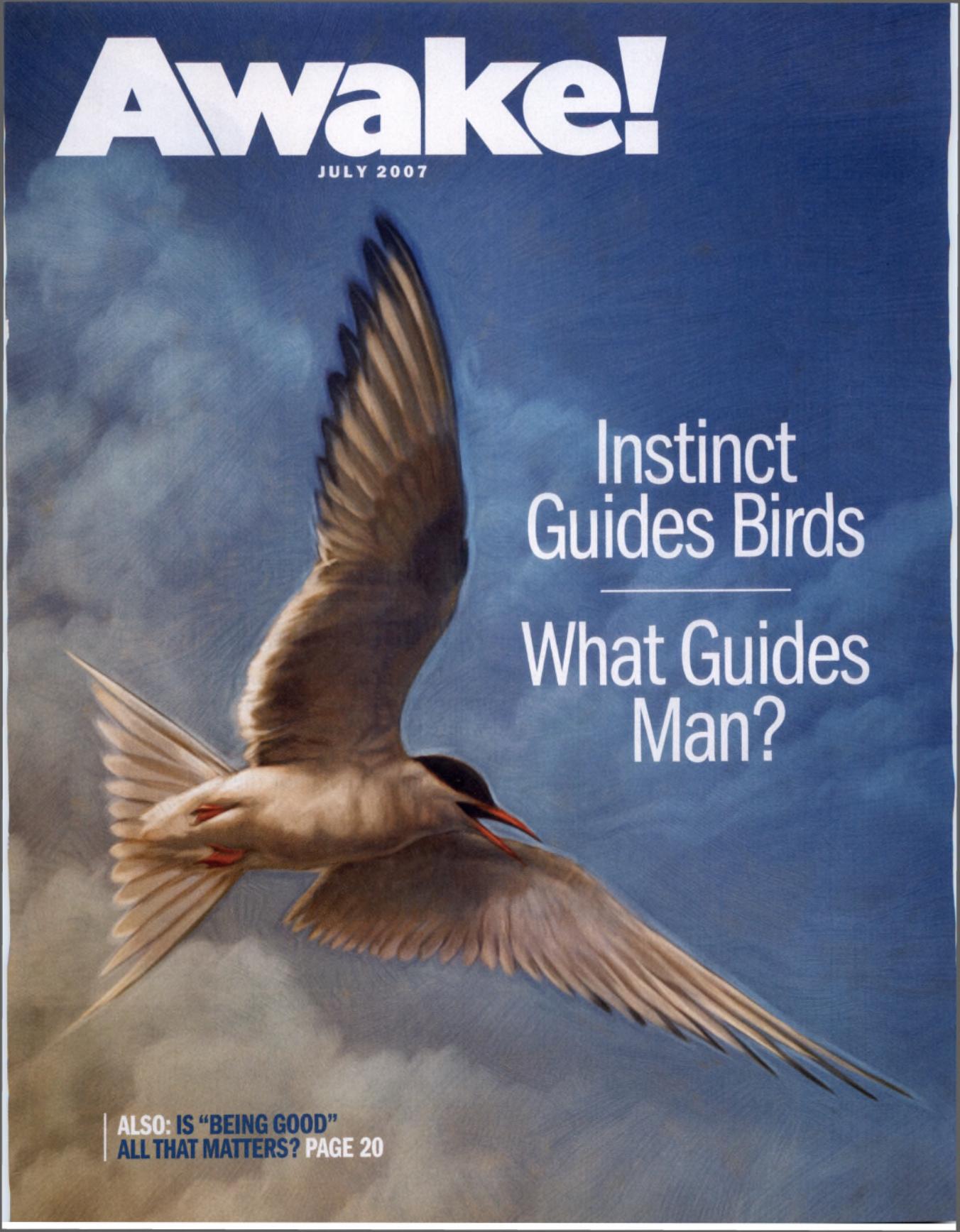


# Awake!

JULY 2007

A detailed illustration of a seagull in mid-flight, viewed from below. The bird's wings are spread wide, showing dark brown feathers on top and lighter ones on the bottom. Its long, deeply forked tail is also clearly visible. The background is a soft-focus blue, suggesting a clear sky.

Instinct  
Guides Birds

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What Guides  
Man?

| ALSO: IS "BEING GOOD"  
ALL THAT MATTERS? PAGE 20

# **Awake!**

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PUBLISHED IN 81 LANGUAGES

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## **Instinct Guides Birds**

## **What Guides Man? 3-9**

Many people go through life unsure about what is right or wrong and where their life is headed. See how you can have the very best guidance as well as a wonderful hope for the future.



### **Why Am I Always Left Out? 10**

Do you feel lonely, perhaps even rejected, when others leave you out of their activities? See how the Bible can comfort and help you.



### **Shark Bay—A Marine Wonderland 15**

Read about a remarkable World Heritage area where dolphins are hand-fed in the wild.



# The Wonder of Instinctive Wisdom



**"Migration is probably the most awe-inspiring natural phenomenon."—COLLINS ATLAS OF BIRD MIGRATION.**

**O**N December 9, 1967, an airline pilot spotted a flock of about 30 whooper swans flying toward Ireland at the amazing altitude of 27,000 feet. Why were they flying so high, where the air temperature was about 40 degrees below zero Fahrenheit? Besides escaping the persistent snow squalls at lower altitudes, they were riding a wind current that gave them a ground speed of about 125 miles an hour. It was estimated that the birds completed their 800-mile flight from Iceland to Ireland in just seven hours.

The world champion migrator—the arctic tern—breeds north of the Arctic Circle yet spends the northern winter in the Antarctic. In a typical year, this small seabird travels between 25,000 and 30,000 miles—the equivalent of circling the globe!

White storks breed in Northern Europe and winter in South Africa, making a round trip of 15,000 miles. Thousands of these birds pass through Israel in the autumn and the spring, following a timetable known back in Bible times.—Jeremiah 8:7.

Who implanted that instinctive ability? Some 3,500 years ago, God posed the following question to the righteous man Job: "Is it owing to your understanding that the falcon soars up, that it spreads its wings to the south wind? Or is it at your order that an eagle flies upward and that it builds its nest high up?"

In his reply Job rightly praised God for the amazing abilities of birds and other animals.  
—Job 39:26, 27; 42:2.

## **Superior to Instinct**

Humans, the crowning achievement of God's creation, are not governed primarily by instinct. Instead, we are free moral agents with a conscience and the capacity for love. (Genesis 1:27; 1 John 4:8) As a result of all these gifts, we can make just and moral decisions that sometimes reflect extraordinary love and self-sacrifice.

A person's attitude and behavior are, of course, largely a product of the moral precepts and spiritual tenets that he was taught, or not taught, from infancy. As a result, people may differ in what they consider to be right or wrong, acceptable or unacceptable. These differences, in turn, can lead to misunderstandings, intolerance, and even hatred, especially when such factors as culture, nationalism, and religion exert a strong influence.

How much better the world would be if the entire human family adhered to one set of standards that reflect moral and spiritual truth, just as we obey the one set of physical laws that govern the universe! But does anyone have the ability and the knowledge to set universal standards? And if so, will he or has he? Those questions will be considered in the following articles.

# Guidance That Surpasses Instinct

"If personal morality comes down to nothing more than the exercise of free choice, with no principles available for moral judgment of the quality of those choices, then law will inevitably be used to fill the resulting moral vacuum."—DR. DANIEL CALLAHAN.

CALLAHAN'S concern has become all too real, for the growing moral vacuum in many parts of the world has forced governments to pass countless laws in an effort to curb crime. At the first-ever Nigerian Mothers' Summit, the president of Nigeria expressed his deep concern about the country's future. He had in mind, not politics or poverty, but "a much deeper problem"—the "general erosion of . . . core values within the family, at work, in the community and nationally."

In Britain a survey of 1,736 mothers found that "the traditional family unit is in meltdown due to plunging moral values and the rise of single parents." In China too, morality is taking a nosedive. People there are having sex earlier in life and with more partners than ever, reported *Time* magazine. "It's my life, and I can do what I want," said a young Chinese woman who boasted of more than 100 sexual partners.

Moral erosion has also affected those in authority. "People no longer look up to their leaders as strong moral exemplars," stated

Javed Akbar in Canada's *Toronto Star* newspaper. Politicians, heads of corporations, and even religious leaders "appear to lack the proper moral fibre," he said.

## Why the Slide?

A number of forces are driving this downward trend. One is a general spirit of rebellion against traditional values. For example, a poll taken in the South in the United States revealed that the majority of college-student respondents felt that "right and wrong is a matter of personal opinion."

Political writer Zbigniew Brzezinski touched on another factor. Today's society, he wrote, "focuses largely on the immediate satisfaction of individual desires, in a setting in which individual and collective hedonism becomes the dominant motive for behavior."\* Moral autonomy, greed, and self-gratification may have a certain appeal, but are they conducive to genuine happiness, contentment, and better relationships with others?

\* Hedonism is the belief that pleasure is the main purpose in life.

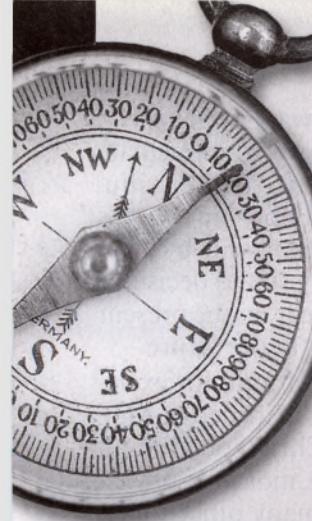
## Awake!®

**THIS JOURNAL IS PUBLISHED** for the enlightenment of the entire family. It shows how to cope with today's problems. It reports the news, tells about people in many lands, examines religion and science. But it does more. It probes beneath the surface and points to the real meaning behind current events, yet it always stays politically neutral and does not exalt one race above another. Most important, this magazine builds confidence in the Creator's promise of a peaceful and secure new world that is about to replace the present wicked, lawless system of things.

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Vol. 88, No. 7 Monthly ENGLISH

# Your Personal Moral “Compass”



Humans have a precious gift—the faculty of conscience. As a result, people of every nation and tribe, as well as of every era, have had codes of conduct with much in common. (Romans 2:14, 15) The conscience, however, is not an infallible guide; it can be influenced by exposure to false religious beliefs, human philosophies, prejudices, and wrong desires. (Jeremiah 17:9; Colossians 2:8) Hence, just as

a pilot may need to calibrate his navigational instruments, we need to check and, when necessary, adjust our moral and spiritual compass according to the righteous standards of “our Statute-giver,” Jehovah God. (Isaiah 33:22) Unlike human standards of conduct, which can change from one generation to the next, God’s perfect standards endure forever. “I am Jehovah; I have not changed,” he says.—Malachi 3:6.

“Wisdom is proved righteous by its works,” said Jesus. (Matthew 11:19) Are people happier and more secure because of the plunging values? Reflect on some of the results: heightened mistrust, insecurity, failed relationships, children growing up without a father or a mother, pandemics of sexually transmitted diseases, unwanted pregnancies, drug addiction, and violence. These realities clearly do not spell satisfaction and success but, rather, sorrow and failure.—Galatians 6:7, 8.

Having seen similar problems in his day, Jeremiah, a prophet of God, made the following inspired observation: “I well know, O Jehovah, that to earthling man his way does not belong. It does not belong to man who is walking even to direct his step.” (Jeremiah 10:23) Yes, God did not create us to be independent from him, to choose right and wrong for ourselves. What may seem good to us may, in fact, be very harmful. “There exists a way that

is upright before a man, but the ways of death are the end of it afterward,” says the Bible at Proverbs 14:12.

## An Enemy Within!

What is one reason why we need guidance on moral matters? Because our hearts can deceive us. “The heart is more treacherous than anything else and is desperate. Who can know it?” says the Bible at Jeremiah 17:9. If you knew someone who was both treacherous and desperate, would you trust him? Of course not! Yet, each of us has a heart that can manifest those very traits. Hence, God gives us this forthright but loving warning: “He that is trusting in his own heart is stupid, but he that is walking in wisdom is the one that will escape.”—Proverbs 28:26.

There is the key: Instead of trusting in our own imperfect faculties, we need to walk in godly wisdom and thus deliver ourselves from many pitfalls. Moreover, precious

**Languages:** Afrikaans, Albanian, Amharic, Arabic, Bulgarian, Cebuano, Chichewa, Chinese, Chinese (Simplified), Croatian, Czech,<sup>#</sup> Danish,<sup>+</sup> Dutch,<sup>+</sup> English,<sup>++</sup> Estonian, Finnish,<sup>+</sup> French,<sup>++</sup> Georgian, German,<sup>++</sup> Greek, Hebrew, Hiligaynon, Hungarian, Iloko, Indonesian, Italian,<sup>++</sup> Japanese,<sup>++</sup> Korean,<sup>++</sup> Latvian, Lithuanian, Macedonian, Malagasy, Malayalam, Myanmar, Norwegian,<sup>+</sup> Polish,<sup>++</sup> Portuguese,<sup>++</sup> Romanian, Russian,<sup>+</sup> Serbian, Sesotho, Sinhala, Slovak, Slovenian, Spanish,<sup>++</sup> Swahili, Swedish,<sup>+</sup> Tagalog, Tamil, Thai, Tsonga, Tswana, Turkish, Ukrainian, Xhosa, Zulu

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<sup>+</sup> CD also available.

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**Would you welcome more information? Write Jehovah’s Witnesses at the appropriate address:** **America:** United States of: Wallkill, NY 12589. **Australia:** Box 280, Ingleburn, NSW 1890. **Britain:** The Ridgeway, London NW7 1RN. **Canada:** Box 4100, Halton Hills (Georgetown), Ontario L7G 4Y4. **Ghana:** P. O. Box GP 760, Accra. **Jamaica:** P. O. Box 103, Old Harbour, St. Catherine. **New Zealand:** PO Box 75142, Manurewa, Manukau 2243. **Nigeria:** P.M.B. 1090, Benin City 300001, Edo State. **South Africa:** Private Bag X2067, Krugersdorp, 1740. **Zambia:** Box 33459, Lusaka 10101. **Zimbabwe:** Private Bag WG-5001, Westgate.

wisdom is readily available to all who sincerely want it. "If any one of you is lacking in wisdom, let him keep on asking God, for he gives generously to all and without reproaching." —James 1:5.

### **Trust God "With All Your Heart"**

Describing our Creator, the Bible says: "The Rock, perfect is his activity, for all his ways are justice. A God of faithfulness, with whom there is no injustice; righteous and upright is he." (Deuteronomy 32:4) Yes, Jehovah is like a massive rock. He can be fully relied upon for sound moral and spiritual guidance no matter what changes occur around us. Says Proverbs 3:5, 6: "Trust in Jehovah with all your heart and do not lean upon your own understanding. In all your ways take notice of him, and he himself will make your paths straight."

Indeed, who could give us better guidance than our Creator, the one who counts "the very hairs of [our] head"? (Matthew 10:30) Furthermore, he has proved to be a true friend, one who loves us enough to be honest with us at all times—even when the truth may be hard for us to swallow.—Psalm 141:5; Proverbs 27:6.

Note, too, that Jehovah does not force us to submit to his guidance. Instead, he appeals to us on the basis of love. "I, Jehovah, am . . . the One teaching you to benefit yourself, the One causing you to tread in the way in which you should walk. O if only you would actually pay attention to my commandments! Then your peace would become just like a river, and your righteousness like the waves of the sea." (Isaiah 48:17, 18) Are you not drawn to a God like that? What is more, he has made his wisdom readily available to us by means of his inspired Word, the Holy Bible, the most widely distributed book in the world!—2 Timothy 3:16.

### **Let God's Word Illuminate the Way**

Concerning the Sacred Scriptures, the psalmist wrote: "Your word is a lamp to my

foot, and a light to my roadway." (Psalm 119:105) A lamp to our foot reveals immediate dangers, while a light to our roadway illuminates the path ahead. Simply put, God's Word can guide us safely through life by helping us to make wise, morally sound decisions in all matters—those that bear on the present and those that may affect us in the future.

Take the Sermon on the Mount, for example. In that short discourse, recorded at Matthew chapters 5 to 7, Jesus Christ spoke about happiness, love, hate, mercy, morality, prayer, the pursuit of riches, and many other topics that are as relevant today as they were back then. So insightful were his sayings that "the crowds were astounded at his way of teaching." (Matthew 7:28) Why not take a few moments to read that sermon yourself. Likely you too will be impressed.

### **"Keep On Asking" for God's Help**

Admittedly, doing what is right in God's eyes is not always easy. In fact, the Bible likens our inner struggle against sin to a war. (Romans 7:21-24) With God's help, however, that war can be won. "Keep on asking," said Jesus, "and it will be given you; keep on seeking, and you will find . . . For everyone asking receives, and everyone seeking finds." (Luke 11:9, 10) Yes, Jehovah will not turn away from anyone sincerely trying to walk the narrow path that leads to everlasting life.—Matthew 7:13, 14.

Note the example of Frank, who was addicted to tobacco when he began to study the Bible with Jehovah's Witnesses. After reading 2 Corinthians 7:1 and correctly concluding that his habit was a "defilement of [the] flesh" in God's eyes, Frank resolved to quit smoking. Acting on his resolve, however, was not so easy. On one occasion he even found himself crawling around on his hands and knees looking for old cigarette butts to light up!

This undignified behavior brought home to Frank how enslaved to tobacco he had become. (Romans 6:16) Thus, he prayed earnestly for help,

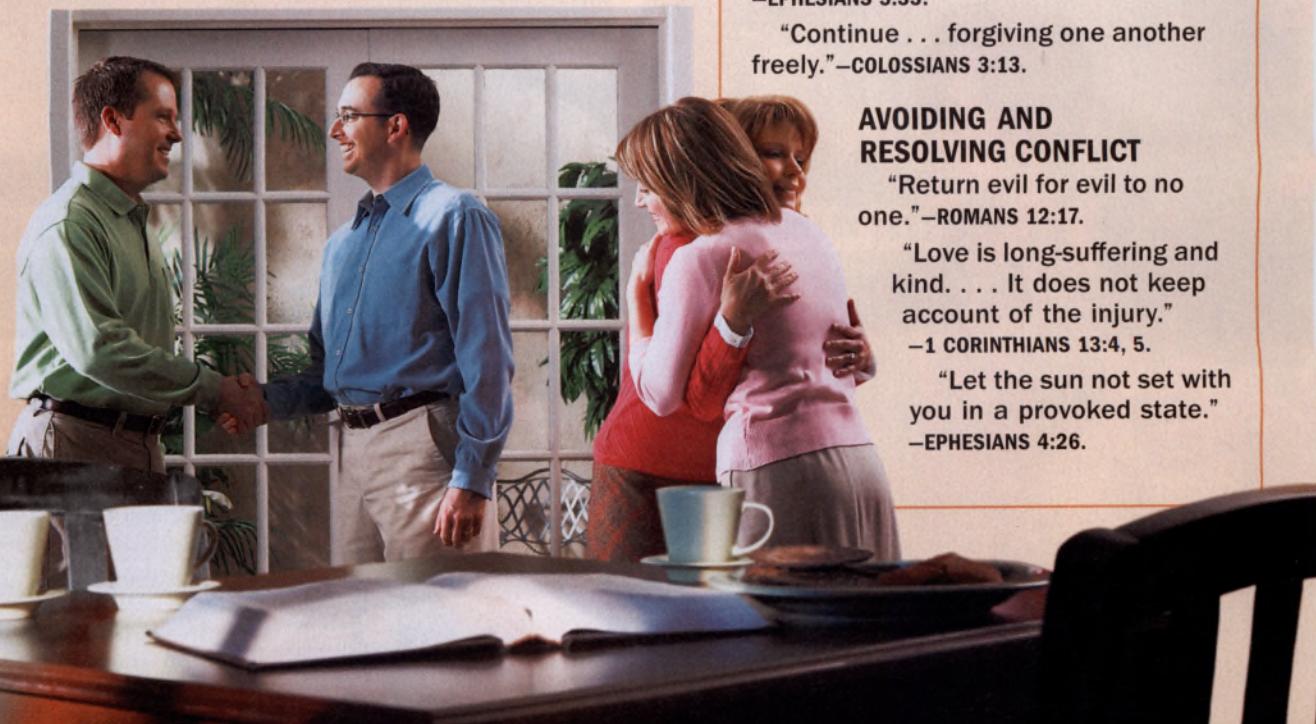
took full advantage of the wholesome association provided by the local Christian congregation of Jehovah's Witnesses, and conquered his bad habit. —Hebrews 10:24, 25.

#### Satisfy Your Spiritual Need

Frank's experience is just one of many showing that the Bible provides superior moral and spiritual guidance, as well as the incentive to act on that guidance. Little wonder, then, that Jesus said: "Man must live, not on bread alone, but on every utterance coming forth through Jehovah's mouth." —Matthew 4:4.

When we take God's precious truths to heart, we benefit in every way—mentally, emotionally, spiritually, and physically. Says Psalm 19:7, 8: "The law of Jehovah is perfect, bringing back [or, reviving] the soul. . . . The orders from Jehovah are upright, causing the heart to rejoice; the commandment of Jehovah is clean, making the eyes shine [with hope and a clear vision of God's purpose]."

By means of his Word, Jehovah does more than help us set our moral compass accurately and live the best life possible now. He also sheds light on the future. (Isaiah 42:9) As the following article shows, that future is bright for all who accept God's guidance.



## Guidance for Success and Happiness

### FINDING HAPPINESS

"Happy are those conscious of their spiritual need." —MATTHEW 5:3.

"There is more happiness in giving than there is in receiving." —ACTS 20:35.

"Happy are those hearing the word of God and keeping it!" —LUKE 11:28.

### BUILDING TRUST

"Speak truth each one of you with his neighbor." —EPHESIANS 4:25.

"Let the stealer steal no more." —EPHESIANS 4:28.

"Let marriage be honorable among all, and the marriage bed be without defilement." —HEBREWS 13:4.

### FORGING GOOD RELATIONSHIPS

"All things . . . that you want men to do to you, you also must likewise do to them." —MATTHEW 7:12.

"Let [a husband] so love his wife as he does himself; . . . the wife should have deep respect for her husband." —EPHESIANS 5:33.

"Continue . . . forgiving one another freely." —COLOSSIANS 3:13.

### AVOIDING AND RESOLVING CONFLICT

"Return evil for evil to no one." —ROMANS 12:17.

"Love is long-suffering and kind. . . . It does not keep account of the injury." —1 CORINTHIANS 13:4, 5.

"Let the sun not set with you in a provoked state." —EPHESIANS 4:26.



# Let God Guide You to “the Real Life”

**A**N ESSENTIAL quality for any guide is trustworthiness. Those who know Jehovah, the Author of the Bible, are convinced that he is the most dependable person of all. He “cannot lie.” (Titus 1:2; 2 Timothy 3:16) God-fearing Joshua, who led Israel into the Promised Land, personally testified to Jehovah’s trustworthiness. In an address to the people, he said: “You well know with all your hearts and with all your souls that not one word out of all the good words that Jehovah your God has spoken to you has failed. They

**“Happy are the mild-tempered ones, since they will inherit the earth.”—MATTHEW 5:5**

have *all come true* for you. Not one word of them has failed.”—Joshua 23:14.

Since Joshua’s time, many more Bible prophecies have come true. This flawless record gives us a solid basis for strong faith in the prophecies that are yet to be fulfilled. A number of these concern God’s purpose for the earth and for obedient mankind.

#### **Will You Benefit From God’s Guidance?**

Jehovah, the personification of love, wants us to be happy now and forever. (John 17:3;

**“The meek ones themselves will possess the earth, and they will indeed find their exquisite delight in the abundance of peace.”—PSALM 37:11**

1 John 4:8) Yes, God desires that we enjoy “the real life”—everlasting life. (1 Timothy 6:12, 19) For this reason, well over six million Witnesses of Jehovah, in obedience to God’s command, joyfully share the “good news of the kingdom” with their neighbors. (Matthew 24:14) At present, they are doing this work in 235 lands—virtually every nation on earth!

God’s Kingdom is a heavenly government in the hands of Jesus Christ. (Daniel 7:13, 14; Revelation 11:15) Under his rulership all the wicked—those who refuse to submit to Jehovah’s righteous standards—will be destroyed. (Psalm 37:10; 92:7) Thereafter, the entire earth “will certainly be filled with the knowledge of Jehovah as the waters are covering the very sea.”—Isaiah 11:9.

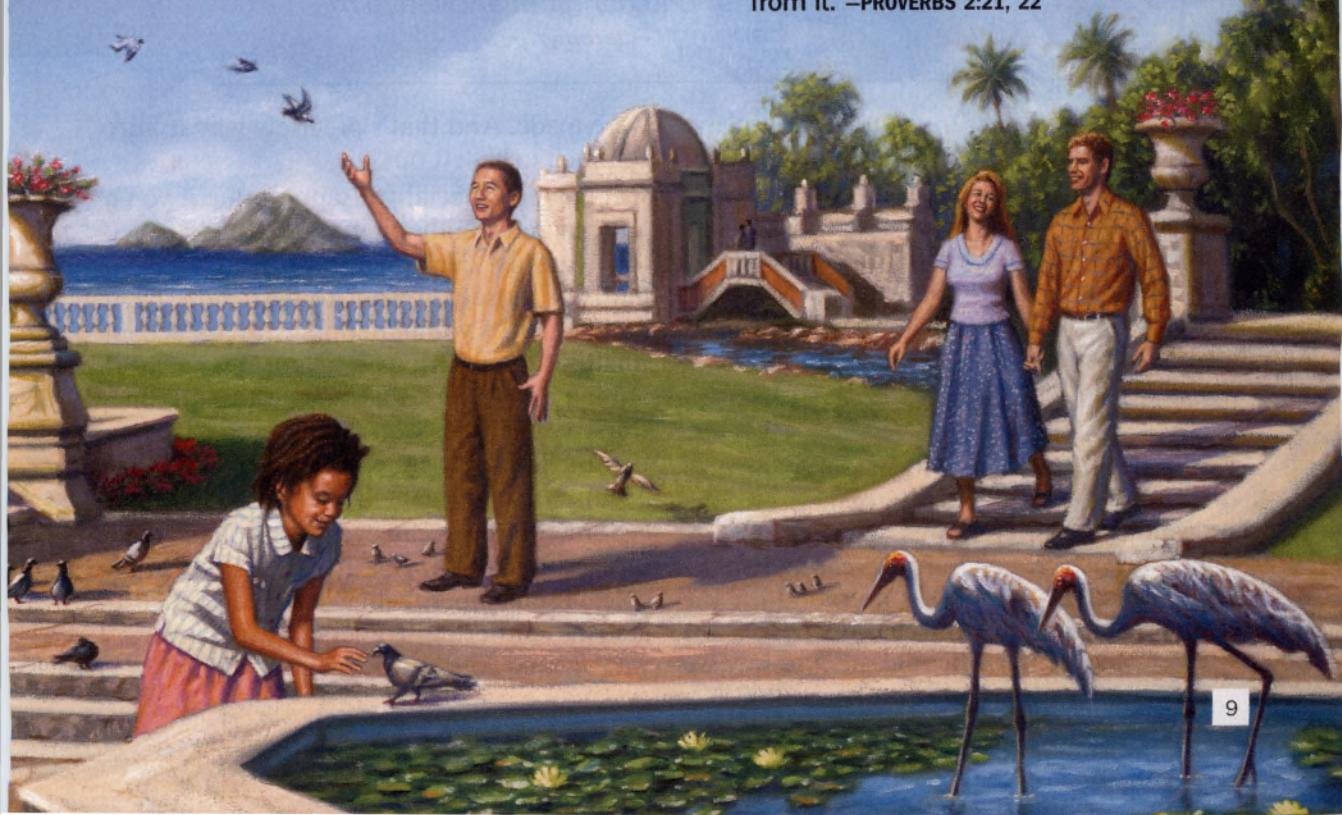
**“The tent of God is with mankind . . . And he will wipe out every tear from their eyes, and death will be no more.”**  
—REVELATION 21:3, 4

Think of the peace and harmony that will prevail when every person on the planet worships God “with spirit and truth” and willingly submits to his loving direction and perfect standards! (John 4:24) At last, people will experience “the real life” promised by God!

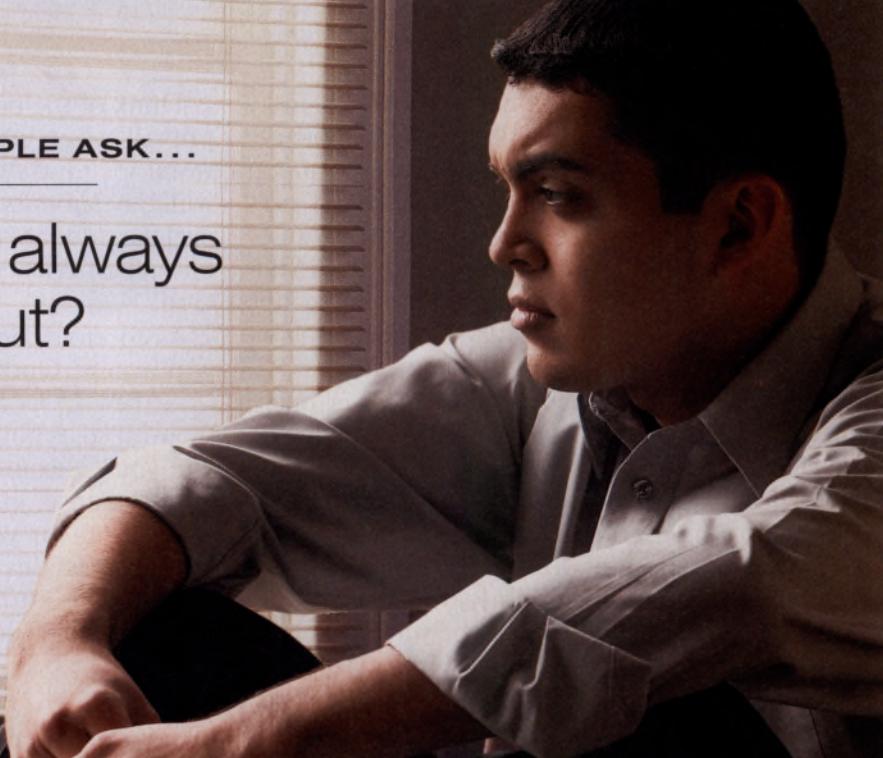
As foretold, however, only relatively few will accept God’s guidance and gain life. (Matthew 7:13, 14) Do you want to be among them? If so, Jehovah’s Witnesses sincerely invite you to examine the Scriptures and let God’s counsel guide you. By doing so, you will “taste” for yourself how good Jehovah really is. (Psalm 34:8) Just as surely as instinct guides birds to their destination, Jehovah will lead his loyal ones to life in Paradise.

—Luke 23:43.

**“The upright are the ones that will reside in the earth, and the blameless are the ones that will be left over in it. As regards the wicked, they will be cut off from the very earth; and as for the treacherous, they will be torn away from it.”**—PROVERBS 2:21, 22



# Why am I always left out?



*"On the weekend it seems as though everyone in the entire world is having fun except me."—Renee.*

*"Kids will get together and hang out and leave me hanging!"—Jeremy.*

IT'S a beautiful day, and you have no plans. Everyone else does, though. All your friends are out having a good time. Once again, *you* were left out!

Being among the uninvited is bad enough, but what it implies can be even worse. 'Maybe there's something wrong with me,' you say to yourself. 'Why doesn't anyone want my company?'

## Why It Hurts

The desire to fit in with a group of people and to be accepted by them is normal. Indeed, as social creatures, we thrive on interaction with others. Before creating Eve, Jehovah said of Adam: "It is not good for the man to continue by himself." (Genesis 2:18) Clearly, people need people; it's the way we

were made. And that's precisely why it hurts so much to be left out.

It can be especially disappointing if you're left out repeatedly or if you're made to feel that you just can't measure up to the standards of those you want to befriend. "There are cliques of young people who are accomplishing great things," says a young woman named Marie, "but you can tell that they think you're not good enough to be around them." When others exclude you from their group, you end up feeling left out and lonely.

Sometimes you can even feel isolated while in a crowd. "Crazy as it sounds," says Nicole, "I remember feeling extremely lonely at a social gathering. I guess it was because I was around lots of people, but I didn't feel

particularly close to any of them." Some feel lonely even while at Christian assemblies and conventions. "It seems as if everyone knows everyone but me!" says Meagan. A young woman named Maria feels similarly. She says, "It's like I'm *surrounded* by friends but *have no friends*."

No one is immune to feeling lonely—not even those who seem to be popular or happy. "Even in laughter the heart may be in pain," states a Bible proverb. (Proverbs 14:13) When loneliness is intense and ongoing, it can be debilitating. The Bible says: "Because of the pain of the heart there is a stricken spirit." Another translation renders the verse: "Sorrow can crush you." (Proverbs 15:13; *Contemporary English Version*) If you have felt crushed because of being left out, what can you do?

### Fighting Loneliness

To fight feelings of loneliness, try the following steps:

■ **Focus on your assets.** (2 Corinthians 11:6) Ask yourself, 'What are my strengths?' Think of some talents or positive qualities you possess, and list them below.

When you feel left out, remind yourself of your strengths—such as those you listed above. True, you have weaknesses and you should work on these. Still, try not to become overwhelmed by your faults. Instead, view yourself as a work in progress. Everything may not be in place, but some things are. Focus on these!

■ **Widen out.** (2 Corinthians 6:11-13) Take the initiative to meet people. Granted, this may be challenging. "Groups can appear to be very intimidating," says 19-year-old Liz, "but if you just go up to one person and say hi, you're suddenly part of the group." (See the box "Conversation Tips.") Speaking of being left out, make sure *you're* not leaving

anyone out—such as older ones. "When I was 10 or 11," recalls a teenager named Cori, "I had a friend who was much older. We were really close, despite the age difference."

Think of two adults in your congregation whom you would like to get to know better.

.....  
.....  
At your next congregation meeting, why not approach one of the people you listed above. Strike up a conversation. Ask that person how he or she became interested in the Bible. The more you reach out to "the whole association of brothers," the less likely it is that you will feel left out and lonely.—1 Peter 2:17.

■ **Confide in an adult.** (Proverbs 17:17)

Sharing your concerns with your parents or another adult can help reduce your feelings of loneliness. That's what one 16-year-old girl found out. At first, she worried too much about being left out. "I would think about what happened that made me feel left out," she says, "replaying it in my mind. But then I would talk to my mom about it, and she would give me advice on how to deal with the situation. Talking it out really helps!"

If you ever need to talk to someone about persistent feelings of loneliness, whom could you approach?

.....  
.....  
■ **Think of others.** (1 Corinthians 10:24)

The Bible says that we should be "keeping an eye, not in personal interest upon just [our] own matters, but also in personal interest upon those of the others." (Philippians 2:4) True, when you feel left out, it's easy to feel depressed or sad. However, instead of sinking further into despair, why not do something for someone in need? You may even be able to forge new friendships that way!

Think of someone, perhaps in your family or congregation, who could use your company or assistance in some way. Write that

## Conversation Tips

- **Smile.** Your warmth will invite others to converse with you.
- **Introduce yourself.** Give your name and where you are from.
- **Ask questions.** Without being nosy, ask appropriate questions about the other person's background.
- **Listen.** Don't be thinking of what you will say next. Primarily, listen. Your next question or statement will come naturally.
- **Relax!** Conversation can open the door to new friendships. So enjoy the experience!

person's name below, and describe how you could help him or her.

When you think of people other than yourself and do things for them, you have less time to feel lonely. This can make you more positive in your outlook and demeanor, making you more attractive as a potential friend. Proverbs 11:25 states: "The one freely watering others will himself also be freely watered."

■ **Be selective.** (Proverbs 13:20) It's better to have a few true friends who care about you than many so-called friends who may get you into trouble. (1 Corinthians 15:33) Consider young Samuel mentioned in the Bible. He may well have been lonely at the tabernacle. His fellow workers included Hophni and Phinehas, whose bad deeds made them poor choices for association—even though they were the high priest's sons. For Samuel to try to fit in with them would have amounted to spiritual suicide. But that was definitely not what Samuel wanted! The Bible says: "All the while the boy Samuel was growing bigger



and more likable both from Jehovah's standpoint and from that of men." (1 Samuel 2:26) Which men? Certainly not Hophni and Phinehas, who may even have shunned Samuel because of his good deeds. Rather, Samuel's praiseworthy qualities endeared him to those who upheld God's standards. People who love Jehovah are the kind of friends you need!

■ **Be positive.** (Proverbs 15:15) Everyone feels left out now and then—at least to a degree. What can help? Instead of dwelling on negative things, strive to adopt a positive view of life. Remember, while you may not be able to control every aspect of your situation in life, you *can* control how you react to things.

When you feel left out, take positive steps either to change the situation or at least to change your view of it. Always remember that Jehovah knows how you are made, so he knows your needs and how these can best be filled. Pray to Jehovah about any persistent feelings of loneliness you may have. Be assured that "he himself will sustain you." —Psalm 55:22.

### TO THINK ABOUT

- What positive steps can I take if I feel left out?
- What scriptures will help me to look at myself in a balanced way instead of being swallowed up by negative thoughts?

More articles from the "Young People Ask . . ." series can be found at the Web site [www.watchtower.org/ype](http://www.watchtower.org/ype)

# Does Anyone Have a Pencil?

BY AWAKE! WRITER  
IN BRITAIN

IT IS inexpensive, instantly ready, and almost weightless. It sits comfortably in the pocket. It needs no power supply, it never leaks, and its marks can be erased. Children learn to write with it, accomplished artists create masterpieces with it, and most of us keep one handy for jotting down notes. Yes, the humble pencil is one of the most affordable and widely used writing instruments in the world. The amazing story of its invention and development begins with a chance discovery in rural England.

## Black Lead

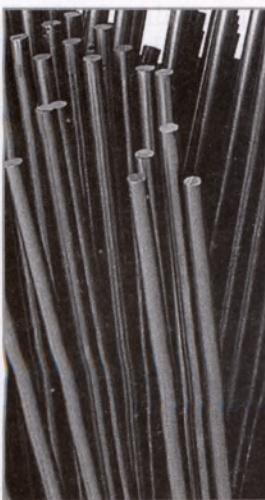
In the 16th century, lumps of a strange black substance were found beneath the hillside of Borrowdale, a valley in the Lake District of northern England. Although the mineral looked like coal, it did not burn; and it left a shiny, black, easily erased mark on a writing surface. Initially, the substance had a variety of names—black lead, wad, and

plumbago, meaning “that which acts like lead.” Because it had a greasy texture, people wrapped chunks of it with sheepskin or short sticks of it with string. No one knows who first thought of putting black lead into wooden holders, but by the 1560's, primitive pencils had reached the European continent.

Soon black lead was being mined and exported to meet the demands of artists; and in the 17th century, it was being used practically everywhere. At the same time, pencil makers experimented with black lead to produce a better writing instrument. Pure and easily extracted, the Borrowdale product became a target of thieves and black marketers. In response, the British Parliament passed a law in 1752 making the theft of the material punishable by imprisonment or banishment to a penal colony.

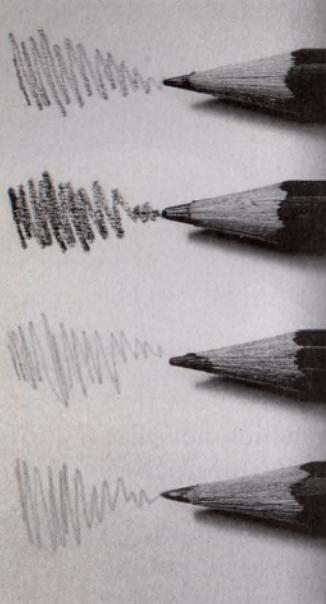
In 1779, Swedish chemist Carl W. Scheele made the surprising discovery that black lead

Faber-Castell AG



## HOW DOES THE LEAD GET INTO THE PENCIL?

A solution of finely ground graphite, clay, and water is forced through a narrow metal tube and comes out looking like a long string of spaghetti. After being dried, cut, and fired in a kiln, the lead is immersed in hot oil and wax. The wood, usually cedar, which is easily sharpened, is sawed into slats—planed and grooved pieces of wood—half a pencil thick. The leads are inserted into the grooves on one slat, and a second slat is glued and pressed on top of the first. When the glue dries, the individual pencils are cut apart. After shaping, sandpapering, painting, and stamping with the manufacturer's trademark and other details, the now seamless pencil is ready for use. Sometimes an eraser is attached to one end.



## WHICH PENCIL SHOULD I USE?

To select the pencil you need, note the letters or numbers printed on the side of the pencil. These indicate the degree of hardness or softness. Softer leads leave a darker mark.

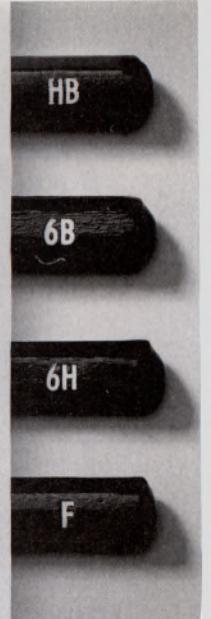
**HB** is a versatile, medium-grade lead.

**B** denotes softer leads. A number such as **2B** or **6B** denotes the degree of softness—the higher the number, the softer the lead.

**H** denotes harder leads. The higher the number—**2H**, **4H**, **6H**, and so on—the harder the lead.

**F** stands for fine point.

Some countries use different systems. In the United States, for example, the number 2 pencil is equivalent to an HB. In that system the higher the number, the harder the lead.



was not lead at all but a soft form of pure carbon. Ten years later German geologist Abraham G. Werner named it graphite, from the Greek *graphein*, “to write.” Yes, contrary to their name, lead pencils actually contain no lead at all!

### The Pencil Comes of Age

For many years English graphite cornered the pencil-making industry because it was pure enough to use without further processing. Since European graphite was inferior, pencil manufacturers there experimented with ways to improve pencil leads. French engineer Nicolas-Jacques Conté mixed powdered graphite and clay, shaped the mixture into sticks, and fired them in a kiln. By varying the ratio of graphite to clay, he was able to make leads that produced different shades of

black—a process still in use. Conté patented his discovery in 1795.

In the 19th century, pencil making became big business. Graphite was discovered in a number of places, including Siberia, Germany, and what is now the Czech Republic. In Germany and then in the United States, a number of factories opened up. Mechanization and mass production drove prices down, and by the start of the 20th century, even schoolchildren were using pencils—unpainted “penny pencils,” as they were called in the United States.

### The Modern Pencil

With many billions manufactured worldwide each year, the pencil has become a sophisticated, versatile writing and drawing instrument. A typical wooden pencil can draw a line 35 miles long and write 45,000 words. Made of metal or plastic, mechanical (or, propelling) pencils hold thin leads that never need sharpening. In the place of graphite, colored pencils use dyes and pigments that come in dozens of colors.

Versatile, robust, simple, and efficient, the lowly pencil shows no signs of obsolescence. Hence, for years to come, whether at home or at work, you may still hear someone ask, “Does anyone have a pencil?”

### IN OUR NEXT ISSUE

- Seven Steps to Better Parenting
- How Can I Stop the Gossip?
- The Spanish Armada—A Voyage to Tragedy



# Shark Bay

## A MARINE WONDERLAND

BY AWAKE! WRITER IN AUSTRALIA

**S**HARK BAY is a large, shallow inlet located at the westernmost point in Australia, some 400 miles north of the city of Perth. In 1629, Dutch explorer Francois Pelsaert branded this desert area "a bare and cursed country, devoid of green or grass." Later visitors recorded their impressions with such names as Hopeless Reach, Useless Inlet, and Disappointment Loop.

Today, though, over 120,000 people flock to Shark Bay annually. So remarkable are the attractions of this remote region that it was placed on the World Heritage List in 1991.\*

### Meadows Bursting With Life

Pelsaert would have found his grass meadows if he had looked under the water, for Shark Bay contains the largest and most diverse sea-grass meadows in the world, over 1,500 square miles in all. The Wooramel Sea-

grass Bank alone stretches 80 miles along the eastern arm of Shark Bay.

The sea grasses, which are actually flowering plants, support a dizzying array of marine life. Juvenile prawns, tiny fish, and countless other marine creatures inhabit this leafy sanctuary. The sea-grass meadows also provide ample food for some 10,000 resident dugongs, or sea cows. These gentle and inquisitive mammals, which weigh up to 880 pounds, quietly graze the abundant underwater pastures, sometimes in herds of over 100. Northern Australia, from Shark Bay in the west to Moreton Bay in the east, may now harbor most of the world's dugongs.\*

True to its name, Shark Bay hosts a large number of sharks of more than a dozen species. They include the fearsome tiger shark and the gigantic but harmless whale shark,

\* The United Nations Educational, Scientific, and Cultural Organization adds to its World Heritage List sites of outstanding cultural or natural value.

\* Although related to manatees, dugongs are a different species. Manatees have a rounded tail, while dugongs have one that is pointed, like that of a dolphin.

the biggest fish in the world. Sharks share these waters with dolphins, exposing the myth that where you find dolphins, you will not find sharks. In fact, researchers have found that about 70 percent of the dolphins in the area bear scars from shark attacks. The bay's diverse animal life also includes thousands of humpback whales that stop here to rest on their annual migration south and a similar number of turtles that arrive each year to lay eggs on the beaches.

#### **Are They Really Rocks?**

In contrast with other parts of Shark Bay, Hamelin Pool, situated at the bay's southern extremity, appears bleak and lifeless. Because of a high evaporation rate, these tepid shallows are twice as salty as normal seawater. What appear to be dull-gray rocks fringe the water's edge. Closer examination, however, reveals that these "rocks" are actually stromatolites, the product of colonies of one-celled microorganisms called cyanobacteria or blue-green algae. About three billion of them occupy every ten square feet!

These hardy microbes mix sticky mucus with materials extracted from seawater to form a cement, which they add layer by layer to their rocklike home. The process is exceptionally slow. Indeed, by the time it grows to a height of one foot, a stromatolite may be nearly 1,000 years old!

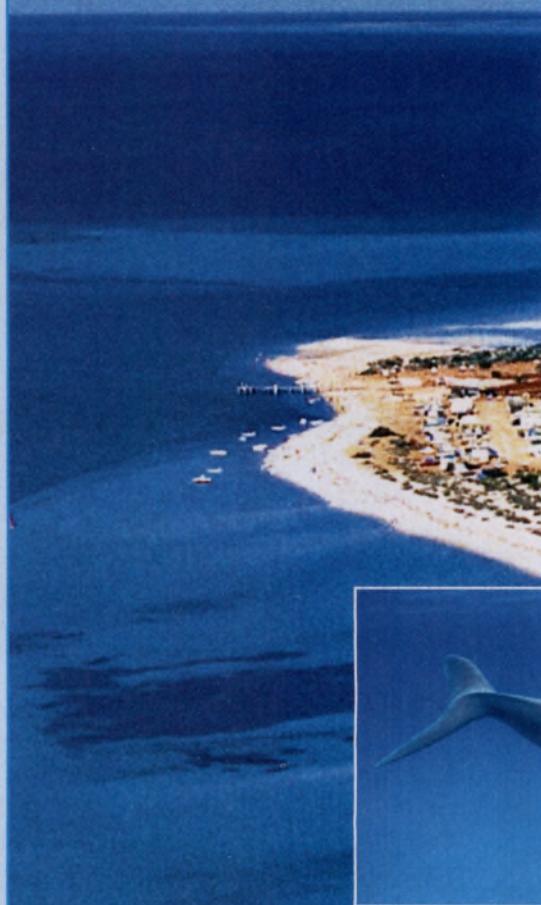
Hamelin Pool contains the most abundant and diverse marine stromatolites in the world. What is more, it is one of the last stromatolite strongholds to be found anywhere.

#### **The Superstars of Shark Bay**

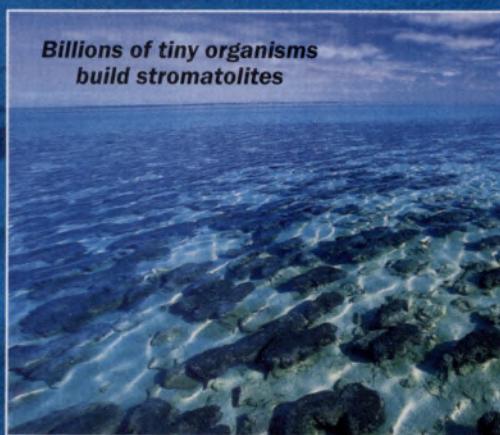
The greatest attractions of Shark Bay are the bottlenose dolphins of Monkey Mia, a beach area on the edge of Denham Peninsula. Monkey Mia is one of the few places in the world where wild dolphins regularly approach shore to interact with humans. No one knows for certain when this interaction began.

Some tell of dolphins herding fish into the shallows in the 1950's—a practice that can still be seen today. People may have taken advantage of this situation to feed and befriend the dolphins. In 1964 a local fisherwoman threw a fish to a lone dolphin splashing around her boat at Monkey Mia. The dolphin, which people called Charlie, returned the next night and

**Aerial view of Monkey Mia beach**



**Billions of tiny organisms build stromatolites**



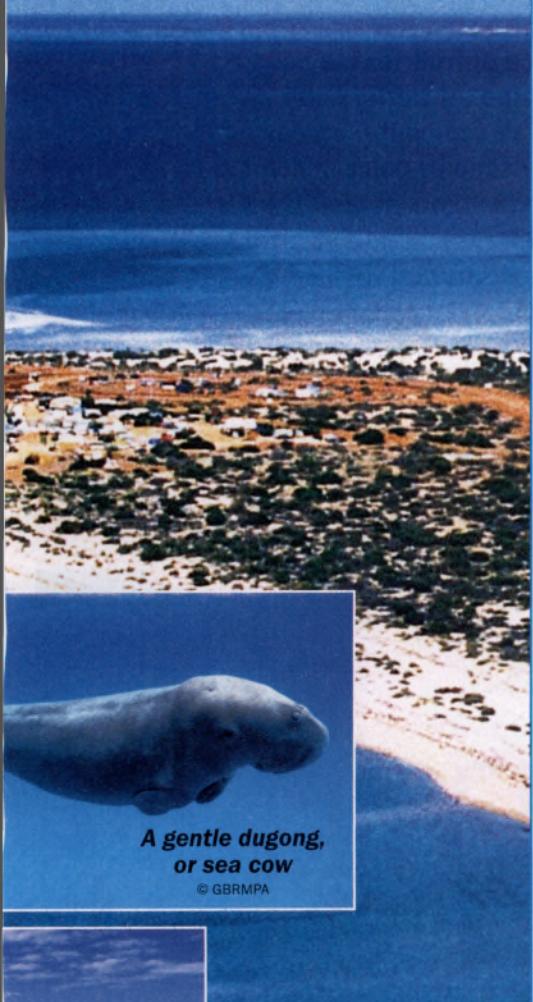
took a fish directly from her hand. Soon, Charlie's friends joined him.

Since then, three generations of dolphins have delighted millions of visitors. They have also delighted biologists, more than 100 of whom from various countries have done research on the animals, making them the most studied dolphins in the world.

These days, dolphins, often with their young, visit Monkey Mia beach most mornings. Crowds of excited visitors await their arrival, but only a few get to share in the feeding. Why? Because park rangers want to ensure that the animals do not become dependent on handouts. Nevertheless, all the people present get a good view of the proceedings. "If only humans could enjoy this intimacy with all of earth's creatures!" exclaimed one woman.

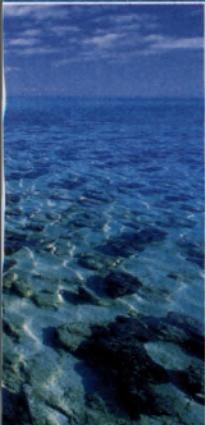
The Bible reveals that such a yearning reflects God's original purpose for humans to have all animals in peaceful subjection. (Genesis 1:28) If you love animals, you will be pleased to know that the fulfillment of God's purpose, although temporarily interrupted by sin, will be fully realized when God's Kingdom, a heavenly government in the hands of Jesus Christ, rules over the earth.—Matthew 6:9, 10; Revelation 11:15.

Under God's Kingdom the entire earth will be a sanctuary of natural beauty, vibrant with health and life. Soon places like Shark Bay may have even more to offer their human visitors than they do now. —Psalm 145:16; Isaiah 11:6-9.



A gentle dugong,  
or sea cow

© GBRMPA



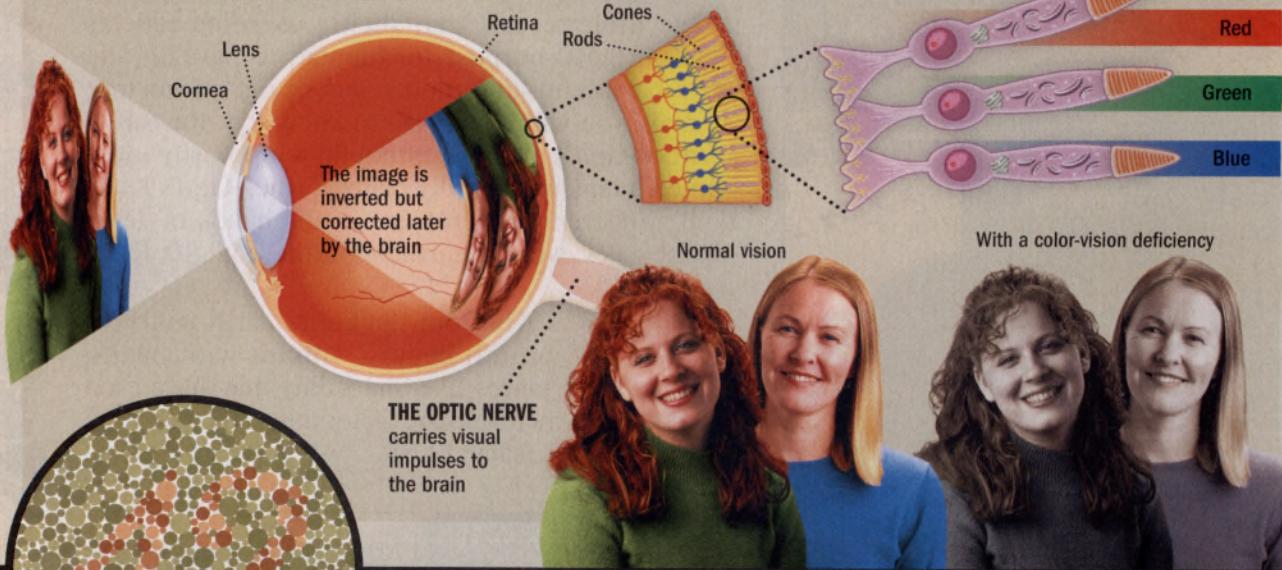
Wild dolphins  
regularly visit  
Monkey Mia beach

# DO YOU HAVE Color-Vision Deficiency?

"When I get dressed, my wife checks that the colors I choose match," says Rodney. "At breakfast she selects a piece of fruit for me because I can't see if the fruit is ripe. At work I can't always see where to click on the computer screen, since items are often distinguished by color. When I'm driving, red and green traffic lights appear the same to me, so I observe whether the illuminated light is on top or on the bottom. Horizontal lights, however, can present a problem."

## HOW WE SEE COLORS

Light from objects passes through the cornea and the lens and is focused on the retina



**THE RETINA** contains cone cells and rod cells. Together they give the full range of vision

**THE CONE CELLS** are sensitive to red, green, or blue light

**THE OPTIC NERVE** carries visual impulses to the brain

## TESTS FOR COLOR-VISION DEFICIENCY

Tests to discover the type and degree of color-vision deficiency that a person has often employ patterns of dots in various hues and shades. The widely used Ishihara test consists of up to 38 different patterns. For example, when viewing one of the test patterns in daylight, a person with normal vision should see the numbers 42 and 74 (at left), while someone having a red-green deficiency—the most common—may see no number at the top and 21 at the bottom.\*

If testing reveals a defect, an eye doctor may recommend further tests to determine whether it was inherited or has some other cause.

\* These diagrams are presented only for the purpose of illustration. Diagnostic tests should be performed by a qualified professional.

**R**ODNEY has color-vision deficiency, also called color deficiency or color blindness. He inherited a genetic flaw that causes a defect in the retina—the light-sensitive inner lining of the eyes. Rodney shares this condition with about 1 of every 12 males of European ancestry and about 1 of every 200 females.\* Like the vast majority of sufferers, Rodney can see different colors—he does not see only black and white. But some colors do not look the same to him as they do to people with normal vision.

In the human eye, the retina normally contains three kinds of cone-shaped color-sensitive cells. Each kind is tuned to the wavelength of a different primary color of light—blue, green, or red. Light of different wavelengths triggers the corresponding cones, which signal the brain and enable one to perceive colors.<sup>#</sup> In people with color-vision deficiency, however, the sensitivity of the cones to one or more colors is weak or shifted in wavelength, so that their response to color is altered. Most sufferers have difficulty distinguishing between yellow, green, orange, red, and brown. This defect can make it hard to see green mold on brown bread or on yellow

\* Color-vision deficiencies can be found in all racial groups, but it is most common among Caucasians.

<sup>#</sup> Many animals can discern colors, although their color vision differs from ours. Dogs, for example, have only two kinds of cones in their retinas—one for blue and the other for a hue between red and green. Some birds, on the other hand, have four kinds of cones and can detect ultraviolet light, which is beyond the human range.

## WHY MAINLY MALES?

Inherited color deficiencies are carried on the X chromosome. Women have two X chromosomes, while men have one X and one Y. Thus, if a woman inherits a visual defect in an X chromosome, the normal gene in the other chromosome will likely override it, and her vision will be fine. But a man who inherits a defect on his X chromosome has no other X chromosome to fall back on.

cheese or to distinguish a blue-eyed blonde from a green-eyed redhead. If a person's red-sensitive cones are very weak, a red rose appears black. Very few sufferers cannot see blue.

### Color-Vision Deficiency and Children

Defects in color vision are usually inherited and present at birth, and children with the condition often learn unconsciously to compensate. For instance, even if they cannot see the difference between certain hues, they may perceive differences in contrast and brightness and associate these variations with the names given to the colors. They may also learn to identify objects by surface patterns and textures instead of by color. In fact, many young people remain unaware of their disability throughout childhood.

Because schools often use color-coded teaching tools, especially in the early grades, parents and teachers may mistakenly think that a child has a learning disability when, in fact, he may have a color-vision deficiency. One teacher even punished a five-year-old boy for painting a picture that had pink clouds, green people, and trees with brown leaves. To a child with color-vision deficiency, these colors may seem perfectly normal. For good reason, therefore, some authorities recommend routine color-vision testing in early childhood.

Although there is no known cure for this condition, it neither worsens with age nor increases the risk for other defects in vision.\* Still, color-vision deficiency is a disability that can be frustrating. Under God's Kingdom rule, however, Jesus Christ will remove every trace of imperfection from God-fearing humans. Thus, people who had visual defects of any kind will see Jehovah's handiwork in all its glory.—Isaiah 35:5; Matthew 15:30, 31; Revelation 21:3, 4.

\* Color-vision deficiency can sometimes be caused by disease. If you notice changes in your color vision later in life, you may want to see an eye doctor.



# Is “Being Good” All That Matters?

“**I**LIVE my life the best way I can and try to be a good person,” says a young woman named Allison. Like her, many believe that such an approach to life is all that God requires.

Others feel certain that even if they sin gravely, God does not care as long as their overall life pattern is positive. They believe that God is more inclined to forgive than to condemn.

Of course, definitions of “being good” vary from person to person. But what does the Bible say? What must we do to have God’s approval? What does it mean to be a good person in God’s eyes?

#### **Accepting Our Creator’s Guidance**

As our Creator, Jehovah God has the right to give us moral direction. (Revelation 4:11) In the Bible, God provides laws and principles to guide our conduct and worship. To his people, God said: “Obey my voice, and you must do things according to all that I command you; and you will certainly become my people and I myself shall become your God.” —Jeremiah 11:4.

So “being good” from God’s viewpoint requires learning what his standards are and adjusting our life to meet them. Imagine that you wanted to become someone’s friend. You would naturally want to know how that one prefers to be treated, and then you would

act in a way that pleases him or her. The Bible indicates that like the patriarch Abraham, we can become Jehovah’s friend—that is, someone he looks upon with favor. (James 2:23) Moreover, since God has much higher standards than we do, we cannot expect him to make changes to fit our personal values.—Isaiah 55:8, 9.

#### **The Importance of Obedience**

Will God really disapprove of us if we disregard “minor” commands? Some may reason that obedience to certain “lesser” commands is not important. However, no law established by God can be dismissed as unimportant. Note that at 1 John 5:3, the Bible makes no distinction when it says: “This is what the love of God means, that we observe his commandments.” When we do our best to keep all of God’s laws, we prove our unselfish love for him.—Matthew 22:37.

Jehovah is not an exacting perfectionist. If we are truly sorry for our errors and try hard to avoid repeating them, he willingly forgives us. (Psalm 103:12-14; Acts 3:19) But can we intentionally ignore certain laws, thinking that this will be offset by our obedience in other matters? A Bible example shows that we cannot.

King Saul of Israel chose to obey God’s commands selectively. When warring with the Amalekites, he was instructed that he

should not spare their livestock. He was to “put them to death.” Although he followed other instructions, Saul disobeyed and spared “the best of the flock and the herd.” Why? He and the rest of the people wanted these for themselves.—1 Samuel 15:2-9.

When the prophet Samuel asked Saul why he had not obeyed God’s command, Saul protested and claimed that he had obeyed. He listed the good things he and the people had done, including sacrifices they had offered to God. Samuel asked: “Does Jehovah have as much delight in burnt offerings and sacrifices as in obeying the voice of Jehovah? Look! To obey is better than a sacrifice, to pay attention than the fat of rams.” (1 Samuel 15:17-22) So we cannot compensate for disobedience to God in certain matters by offering sacrifices or doing other works that are good.

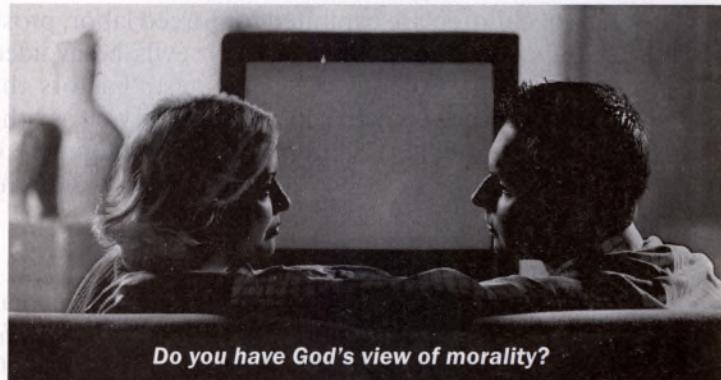
#### **God’s Standards—Evidence of His Love**

Jehovah lovingly does not expect us to guess how to please him. In the Bible he gives clear moral direction, saying in effect: “This is the way. Walk in it, you people.” (Isaiah 30:21) When we follow his direction, we avoid the frustration and uncertainty of sifting through the conflicting moral opinions of humans. And we can be confident that God’s guidance is always for our good, ‘teaching us to benefit ourselves.’—Isaiah 48:17, 18.

What is the danger in choosing for ourselves what constitutes “being good”? We have all inherited a tendency to act selfishly. Our own hearts can deceive us. (Jeremiah 17:9) We could easily minimize the importance of God-given requirements that we construe to be difficult or restrictive.

For example, two unmarried people may

choose to have sex, thinking that since no one else is involved, it is purely a personal matter. They may realize that their actions do not meet Bible standards but may conclude that as long as “no one gets hurt,” God is unlikely to object. Their desires could blind them



***Do you have God’s view of morality?***

to the full significance and consequences of their actions. The Bible warns: “There exists a way that is upright before a man, but the ways of death are the end of it afterward.”—Proverbs 14:12.

All of Jehovah’s laws reflect his love for humans and his desire to see us avoid suffering. Sidestepping God’s standards regarding sexual morality or other conduct has not led people to greater happiness and success in life. For many, it has greatly complicated their life. On the other hand, following God’s laws helps us in our efforts to lead a good life and to avoid causing needless harm to ourselves and to others.—Psalm 19:7-11.

If you are sincere in your desire to be a good person from God’s viewpoint, then make every effort to follow his direction. You will experience for yourself that “[Jehovah’s] commandments are not burdensome.” —1 John 5:3.

#### **HAVE YOU WONDERED?**

- Why should we accept our Creator’s guidance?—Revelation 4:11.
- Must we obey all of God’s commands?—1 John 5:3.
- Why is it not wise for us to choose our own moral standards?—Proverbs 14:12; Jeremiah 17:9.

## Violence Against Children

"For many children violence is routine, a part of their daily reality," notes the World Health Organization. According to a recent report by the UN secretary-general, "almost 53,000 children died worldwide in 2002 as a result of homicide." In addition, millions of children are exploited for forced labor, prostitution, or pornography. Can such evils be avoided? The secretary-general's report states: "Factors that are likely to be protective in the home as well as other settings include good parenting, the development of strong attachment bonds between parents and children and positive non-violent discipline."

## Good Friends, Long Life!

Having a network of good friends may well increase a person's life span, reports the *Journal of Epidemiology and Community Health*. A study of nearly 1,500 Australians aged 70 or over examined how relationships affected longevity over a ten-year period. Individuals with a strong network of friends had a mortality rate 22 percent lower than those with few friends. Active friendships also have a positive effect among the elderly when it comes to "depression, self efficacy, self esteem, coping and morale, or a sense of personal control," says the report.

## Britons in Debt

"More than a third of adults with bank accounts are relying on their overdrafts to keep them afloat," says *The Daily Telegraph* of London. An overdraft, instead of being viewed as an emergency credit, has become an "absolute necessity" for the 3.5 million Brit-

■ "Drunk driving is one of America's deadliest crimes," said acting Secretary of Transportation Maria Cino. Of all U.S. traffic deaths during 2005, 39 percent involved alcohol.—U.S. DEPARTMENT OF TRANSPORTATION.

■ "Over 46,000 pieces of plastic litter are floating on every square mile of ocean today."

—UNITED NATIONS ENVIRONMENT PROGRAMME.

■ "U.S. workers spend half a billion hours per year playing [computer] games on the job, at a cost of \$10 billion in lost productivity." This does not include time "spent surfing the web at work for personal use."

—MANAGEMENT-ISSUES WEB SITE.

ons who are permanently overdrawn. Keith Tondeur, chief executive of the charity Credit Action, blames the "instant gratification culture that engulfs our society." Tondeur warns: "Millions of us are permanently living beyond our means and the lack of even basic money education means most of us haven't the faintest idea how much this is costing us."

## Night Flights and Global Warming

The condensation trails, or contrails, left in the sky by jet airliners affect atmospheric temperature, says *Scientific American*. During the day these contrails reflect incoming sunlight, resulting in a net cooling of the atmosphere. At night, however, they trap heat beneath them. English researchers found that "flying between 6 P.M. and 6 A.M. contributed between 60 and 80 percent of the climate warming that originated from contrails, even though these flights represent a quarter of the total air traffic," states the report.



# Feathers A MARVEL OF DESIGN

WITH a downward thrust of its wings, a seagull launches itself skyward. Once aloft, it wheels and turns, rising effortlessly on the wind. Making only tiny adjustments to the angle of its wings and tail, the bird hangs nearly motionless in the air. What enables it to perform those functions with such grace and perfection? To a great extent, its feathers.

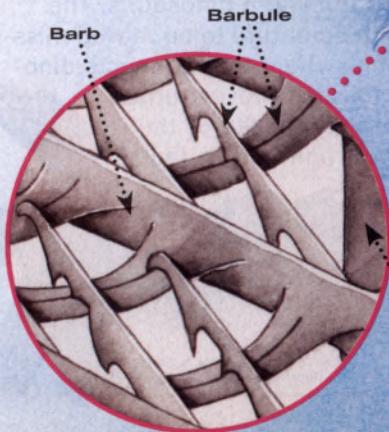
Birds are the only animals today that grow feathers. Most birds have different kinds of feathers. The most visible are the overlapping contour feathers, which give birds their smooth, aerodynamic shape. Contour feathers include the wing and tail feathers, which are vital to flight. A hummingbird may have fewer than 1,000 such feathers, and a swan more than 25,000.

Feathers are a marvel of design. The central shaft, called the *rachis*, is flexible and remarkably strong. Extending out from it are rows of interlocking *barbs* that form the smooth *vane* of the feather. The barbs attach to one another by means of several hundred tiny *barbules*, which hook onto neighboring barbules, forming a kind of zipper. When barbules unzip, the bird simply zips them back together by preening itself. You can do the same by drawing a frayed feather gently between your fingers.

Wing flight feathers in particular are asymmetrical—the vane is narrower on the leading edge than on the trailing edge. This classic airfoil design enables each flight feather to act like a tiny wing in itself. Also, if you look closely at a major flight feather, you will see a groove running along the underside of the rachis. This simple design element strengthens the shaft, allowing it to bend and twist without buckling.

## Feathers Have Many Functions

Distributed among the contour feathers of many birds are long, thin feathers called *filoplumes*, as well as *powder feathers*. It is thought that sensors at the roots of the filoplumes alert the bird to any disturbance of its outer feathers and may even help it to judge its air speed. The barbs of powder feathers—the only feathers that grow continuously



and are never molted—break down into a fine powder that is thought to help waterproof the bird's plumage.

Besides their other functions, feathers protect birds from heat, cold, and ultraviolet light. Sea ducks, for example, seem to thrive despite bitterly cold ocean winds. How? Under their nearly impenetrable coat of contour feathers lies a dense layer of soft, fluffy feathers called *down*, which may be up to two thirds of an inch thick and cover most of the duck's body. Natural down is so efficient an insulator that no synthetic material yet devised equals it.

Feathers eventually wear out, so birds replace them by molting—shedding old feathers and growing new ones. Most birds molt their wing and tail feathers in a predictable, balanced order so that they always retain their ability to fly.

#### "A Little Too Perfect"

Safe airplanes are the product of painstaking design, engineering, and craftsmanship.

## FORGED "EVIDENCE"

Some fossil "evidence" that was once loudly hailed as proof that birds evolved from other creatures has since been shown to have been forged. In 1999, for instance, *National Geographic* magazine featured an article about a fossil of a feathered creature with a tail like a dinosaur's. The magazine declared the creature to be "a true missing link in the complex chain that connects dinosaurs to birds." The fossil, however, turned out to be a forgery, a composite of the fossils of two different animals. In fact, no such "missing link" has ever been found.



O. Louis Mazzatorta/National Geographic Image Collection



What about birds and feathers? In the absence of fossil evidence, controversy rages among evolutionists over how feathers originated. "Fundamentalist fervor," "vitriolic name-calling," and "paleontological passion" pervade the debate, states the magazine *Science News*. One evolutionary biologist, who organized a symposium on feather evolution, confessed: "I never dreamed that any scientific matter could possibly generate such bad personal behavior and such bitterness." If feathers clearly evolved, why should discussions of the process become so vitriolic?

"Feathers are a little too perfect—that's the problem," notes Yale University's *Manual of Ornithology—Avian Structure and Function*. Feathers give no indication that they ever needed improvement. In fact, the "earliest known fossil feather is so modern-looking as to be indistinguishable from the feathers of birds flying today."\* Yet, evolutionary theory teach-

\* The fossil feather is from archaeopteryx, an extinct creature sometimes presented as a "missing link" in the line of descent to modern birds. Most paleontologists, however, no longer consider it an ancestor of modern birds.



## A BIRD'S-EYE VIEW

The vivid and often iridescent colors of feathers fascinate humans. But feathers may look even more interesting to other birds. Some birds have four types of color-detecting cones in their eyes, while humans have only three. This extra visual equipment enables birds to perceive ultraviolet light, which is invisible to humans. Male and female birds of some species look alike to humans, but the male's feathers reflect ultraviolet light differently from the female's. The birds can see the difference, which may help them to identify potential mates.

es that feathers must be the result of gradual, cumulative change in earlier skin outgrowths. Moreover, "feathers could not have evolved without some plausible adaptive value in all of the intermediate steps," says the *Manual*.

To put it simply, even in theory, evolution could not produce a feather unless *each step* in a long series of random, inheritable changes in feather structure significantly improved the animal's chances for survival. Even many evolutionists find it a stretch of the imagination that something as complex and functionally perfect as a feather could arise in such a way.

Further, if feathers developed progressively over a long period of time, the fossil record should contain intermediate forms. But none have ever been found, only traces of fully formed feathers. "Unfortunately for evolutionary theory, feathers are very complicated," states the *Manual*.

### Avian Flight Demands More Than Feathers

The perfection of feathers is just one problem for evolutionists, for practically every

part of a bird is designed for flight. For instance, a bird has light, hollow bones as well as an unusually efficient respiratory system and specialized muscles to flap and control its wings. It even has a number of muscles to control the position of individual feathers. And it has nerves that connect each muscle to the bird's tiny but amazing brain, which is preprogrammed to control all these systems simultaneously, automatically, and precisely. Yes, this whole, incredibly complex package is necessary for flight, not just the feathers.

Keep in mind, too, that every bird develops from a tiny cell that contains the complete instructions for its growth and instincts, so that one day it can take to the sky. Could all this arise from a long string of advantageous accidents? Or is the simplest explanation also the most reasonable and scientific one—that birds and their feathers bear the marks of a supremely intelligent Maker? The evidence speaks for itself.—Romans 1:20.

# *“Jehovah, please let me serve you”*

AS TOLD BY DANIELLE HALL

*When I was a little girl,  
I loved to visit Nanna, who lived next  
door. Every day she took an afternoon nap.  
If I happened to visit her then, we would  
sit up in bed together while she read me  
Bible stories. She often told me: “Never forget  
that Jehovah loves you. And if you love him,  
he will always look after you.”  
Her words became deeply etched  
in my mind and heart.*



**N**ANNA died in 1977, when I was four years old. She was one of Jehovah's Witnesses, as were all of Dad's relatives in our hometown of Moe, Australia. My parents were not Witnesses, but Dad was favorably disposed toward them. Our family later moved to Tintenbar, a small town near the New South Wales coast. There my older brother, Jamie, and I occasionally attended Witness meetings with Dad.

When I was eight years old, my parents separated. Dad returned to Moe, while Jamie and I stayed with Mum. She was not interested in the Bible and did not want us to attend Witness meetings. This made me very sad. Nanna's words

**With Nanna**



stirred deep within my heart. I knew that I did love Jehovah! And I wanted to serve him. So I prayed to Jehovah and told him that I too was one of his Witnesses. Jamie felt the same way.

### Trials at School

Soon afterward, a teacher at school asked each child in our class to call out his or her religion so that he could record it in a roll book. When it was Jamie's turn, he called out in a loud, clear voice, "Jehovah's Witness." The teacher stopped and asked him to repeat his answer, which he did. "I don't think so, but I'll come back to you later," said the teacher. When it was my turn, I also called out loudly, "Jehovah's Witness." Clearly frustrated, the teacher summoned the school principal.

"I have your enrollment papers in front of me, and your parents did not register you as Jehovah's Witnesses," the principal stated firmly. "But that is the religion we follow," we respectfully replied. Neither he nor the teacher ever raised the issue again.

At school I tried to share my limited Bible knowledge with my classmates. By taking along my copy of *My Book of Bible Stories*, I was occasionally able to read stories to one girl who believed in God.\* But because I tried to live up to Christian standards, I was never very popular and, at times, felt very lonely.

I prayed to Jehovah so often and intensely that he became my closest friend. Each day after school, I sat on my bed and told Jehovah about the events of that day, right down

to the last detail. I cried often. With tears rolling down my cheeks, I begged, "Jehovah, please let me serve you along with your people." After praying I always felt much better.

### A Strengthening Letter

When I was ten, Jamie returned to Moe to live with Dad. Now I was even more spiritually isolated. Then, while visiting a neighbor's house, I found some magazines published by Jehovah's Witnesses. I excitedly memorized the address of the local branch office and then hurried home to write it down. I wrote the branch a heartfelt letter explaining my situation and asking for spiritual help. Their touching, two-page reply, written solely for me, filled my eyes with tears. Here was proof that I was precious to Jehovah!

The letter urged me to imitate the faith of the little Israelite girl who became a servant to Naaman, a Syrian army chief in Bible times. Although captive and living far away from her homeland, she stayed close to her God, Jehovah. And by boldly speaking about her faith, she showed herself to be a true witness for him.—2 Kings 5:1-4.

The letter from the branch office added: "As a young girl, you should serve Jehovah by being obedient to your parents and working hard at school. Also, you need to keep close to Jehovah in prayer and study." In conclusion, the letter said: "Danielle, remember that no matter where we may live, Jehovah is always near to us. We know you believe this." (Romans 8:35-39) That letter, now old and worn, remains in the front of my Bible. I have read it often over the years but not once without tears.

Shortly thereafter, I received another letter. It said that my father had arranged for me to receive the *Watchtower* and *Awake!* magazines through the mail. I was overjoyed! Now I had a regular supply of spiritual food. When each issue arrived, I read it from cover to cover. I still have my very first copies of those beautiful journals. At about this time,

\* Published by Jehovah's Witnesses.

- 1. Wasted it on immoral living—Luke 15:11-13.
- 2. He left pity for him.—Luke 15:20-24.
- 3. He was resentful and jealous.—Luke 15:25-30.
- 4. Moses, 1473 B.C.E.
- 5. David, the sons of Korah, Heman, Asaph (house of), Moses, Solomon, Ethan, and perhaps others, 460 B.C.E.
- 6. Paul, 60-61 C.E.
- 7. Eliphaz—Job 4:1, 13-18.
- 8. Epaphras.—Colossians 4:12, 13.

a Christian elder from the local congregation began to visit me. His visits, although brief, were very encouraging.

### Changes Bring Progress

Despite my improved spiritual situation, I still yearned to worship Jehovah freely. So when I reached 13, I asked Mother if I could live with Dad. I loved Mum dearly, as she did me, but I was determined to serve God. When she agreed, I returned to Moe and started studying the Bible with the local congregation. With Dad's approval, Jamie and I also attended all of the meetings. The local Witnesses went out of their way to help us. Jamie and I made rapid spiritual progress and were later baptized within a few months of each other. Yes, my childhood prayer was answered. I was serving Jehovah along with his people!

Meanwhile, I developed a special relationship with my uncle and aunt, Philip and Lorraine Taylor, who were also in the Moe Congregation. They treated me like a daughter. When they moved to the island of Bougainville, Papua New Guinea, to serve where the need for Kingdom preachers was greater, I jumped at their invitation to accompany them. I was only 15 years old, but Dad and Mum allowed me to go.

In Bougainville I continued my schooling by correspondence. Otherwise, I spent most of my time witnessing. What a joy it was to work along with missionaries and pioneer ministers! The local people were by far the most humble I had ever met, and many were keen to study the Bible.

Later that year political strife erupted, and it became too dangerous for me to stay. Leaving that little island with its beautiful people was heartbreaking. As my small plane took off, I saw Uncle Philip standing on the tarmac waving good-bye. Crying my heart out, I silently begged Jehovah to allow me someday to serve as a missionary in a foreign land.

### More Prayers Answered

Back in Australia, after finishing high school, I took up an office traineeship with a legal firm. Meanwhile, Dad had remarried and was caring for a large stepfamily. Jamie lived with Mum. For a time, I moved back and forth between both parents. Life seemed complicated. I needed to simplify my life and focus on spiritual goals. So in 1994, I entered the full-time ministry in Moe as a pioneer.

I was happy again. My friends were spiritually inclined youths in the congregation, and they became my strong support. In fact, in 1996, I married one of them—Will—a soft-spoken, kind, and humble man, who was a true blessing from Jehovah.

We settled into married life, and our happiness seemed complete. One day, Will arrived home after working with the traveling overseer who visited congregations in our area. Sitting me down, he asked, "Would you be willing to move to assist another congregation?" In my heart I immediately said yes. However, I playfully asked: "Where? Vanuatu? Fiji?" When Will replied "Morwell," I blurted out, "But that's next door!" We both laughed and instantly agreed that we would be delighted to move to our neighboring congregation to serve as pioneers.

The next three years, in Morwell, were happy and productive. Then came another surprise. We received an invitation from the Australia branch office of Jehovah's Witnesses to serve as special pioneers. Our assignment? East Timor, a small country at the eastern end of the Indonesian archipelago.\* My eyes filled with tears. I thanked Jehovah for answering all my prayers. Not only had he welcomed me as his servant but now my husband and I could serve in a foreign country.

\* Called East Timor by English speakers, it is also known as Timor-Leste.

## Serving Overseas

We arrived in Dili, the capital, in July 2003. Dili Congregation—the only one in the country—consisted of 13 special pioneers from Australia and a handful of local Witnesses. The Timorese brothers and sisters were very poor; most had lost possessions and family members in the 24-year-long civil war that ended in 1999. Many had also endured strong family opposition to their newfound faith. Despite their tribulation and poverty, however, they were spiritually rich and happy.—Revelation 2:8, 9.

We found that most Timorese were God-fearing and respected the Bible. Soon, in fact, we had more Bible studies than we could handle! In time, some of our early students served alongside us as our baptized brothers and sisters. Seeing their spiritual progress brought us great joy.

Then, in 2006, Dili again descended into chaos. Tensions between different ethnic groups exploded into full-

scale conflict. Many homes were looted or burned to the ground, and local Witnesses sought refuge in the homes of the special pioneers. Our house and yard were transformed into a temporary refugee camp, and at one time nearly a hundred people lived with us! Our large carport became a kitchen, dining room, and temporary Kingdom Hall.

Although gunfire and grenades exploded nearby, our pioneer home was a refuge of peace. We all felt Jehovah's protective hand over us. Each day began with a group discussion of a Bible text. Meetings were held as normal. We also conducted Bible studies with interested ones.

As the weeks passed, it became clear that it would be dangerous for brothers born in the east of the country to remain in Dili. So responsible Witnesses decided to establish a new group in Baucau, the second-largest city, located three hours east of Dili. And that is why Will and I received a new assignment.

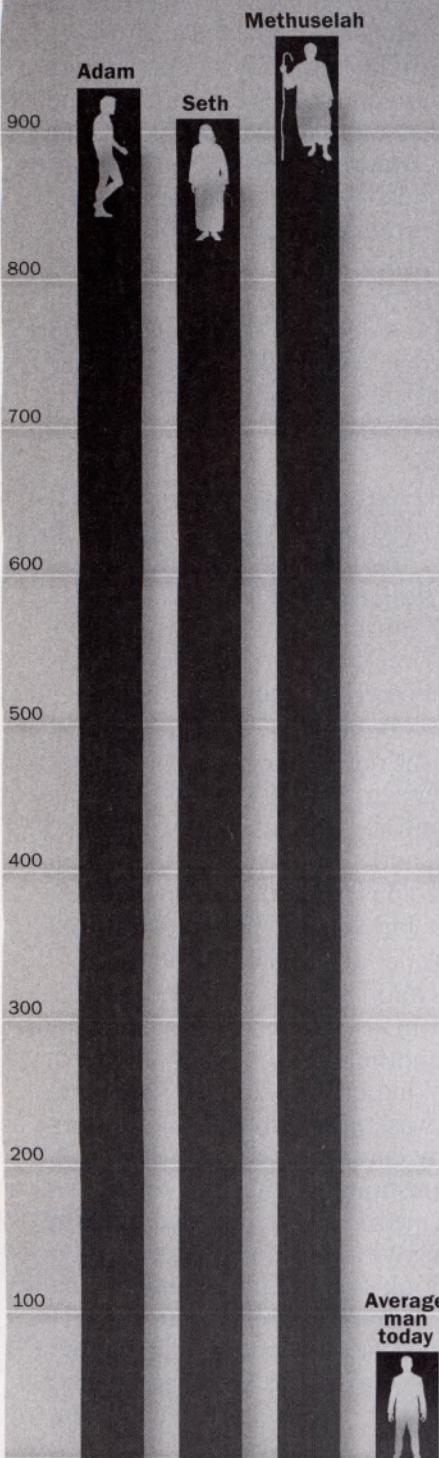
We arrived in Baucau in July 2006, almost three years to the day after our arrival in East Timor. Our new group consisted of four special pioneers and six Timorese Witnesses. The local brothers and sisters had abandoned all their possessions in Dili, yet they had not lost their big smiles. We truly admired their loyal, self-sacrificing spirit!

Will and I still serve in Baucau. We love our assignment and view it as yet another blessing from Jehovah. Looking back, I can see that Nanna was right. Jehovah has unfailingly cared for me over the years. I constantly thank him for allowing me the privilege of serving him along with his people. I also eagerly look forward to seeing Nanna again in the resurrection. Then

I can thank her for giving me the key that opened the door to a truly happy and rewarding life.



*With my husband, Will*



# Did They Really Live That Long?

According to the Bible, Adam lived for 930 years, Seth for 912, and Methuselah for 969—just 31 years short of a thousand! (Genesis 5:5, 8, 27) Were those years similar in length to ours today, or were they shorter periods, perhaps equivalent to our months, as some have suggested?

The internal evidence in the Bible points to literal years similar in length to ours. Consider: Had the ancient year been only as long as our month, the following men would have become fathers at an impossibly early age: Kenan before he was six years old, and Mahalalel and Enoch just over the age of five.—Genesis 5:12, 15, 21.

Moreover, the ancients distinguished between days, months, and years. (Genesis 1:14-16; 8:13) In fact, Noah's detailed chronology helps us to determine the length of a month. A comparison of Genesis 7:11, 24 and Genesis 8:3, 4 shows that five months—from the 17th day of the second month to the 17th day of the seventh month—equaled 150 days. Evidently, then, Noah employed a 30-day month, 12 of which added up to a year.—Genesis 8:5-13.\*

But how could people live for 900 years or more? The Bible tells us that God made humans to live forever and that Adam's sin brought imperfection and death to the human family. (Genesis 2:17; 3:17-19; Romans 5:12) Those who lived before the Flood were much closer to perfection than we are today, and this was no doubt a major factor in their longevity. Methuselah, for instance, was only seven generations removed from Adam.—Luke 3:37, 38.

Soon, however, Jehovah God will eliminate every trace of Adamic sin from all who exercise faith in the shed blood of his Son, Jesus Christ. “The wages sin pays is death, but the gift God gives is everlasting life by Christ Jesus our Lord.” (Romans 6:23) Yes, the time is coming when Methuselah's 969 years will seem very short indeed!

\* See *Insight on the Scriptures*, Volume 2, page 1214, published by Jehovah's Witnesses.



### EXPLAIN THE PARABLE

1. In Jesus' parable recorded at Luke 15:11-32, what did one son do with his inheritance?
2. How did the father feel toward his repentant son?
3. How did the other son respond to the way his brother was treated?

#### ■ For Discussion:

How is Jehovah like the father in the parable?  
How do you feel about the way the son who stayed at home reacted?

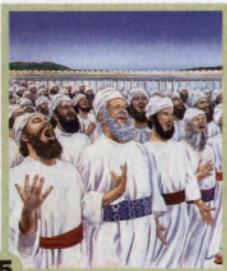
### WHEN IN HISTORY?

Name the writer(s) of the Bible books below, and draw a line connecting the book to the approximate date it was completed.



4

Job



5

Psalms



6

Colossians

1473 B.C.E.

1513 B.C.E.

460 B.C.E.

55-56 C.E. || 60-61 C.E.

(Answers on page 27)

### WHO AM I?

7. After receiving a vision from a wicked spirit, I concluded that God has no faith in his servants.

### WHO AM I?

8. I came from Colossae and exerted myself in prayer for the congregations in Laodicea and Hierapolis.

### FROM THIS ISSUE

Answer these questions, and provide the missing Bible verse(s).

**Page 5** Why is it unwise to trust our own heart?  
(Jeremiah 17:\_\_\_\_)

**Page 7** What do Jehovah's laws and reminders do for us?  
(Psalm 19:\_\_\_\_)

**Page 11** What should we keep an eye on?  
(Philippians 2:\_\_\_\_)

**Page 20** How can we prove that we love God?  
(1 John 5:\_\_\_\_)

Bottom circle: Image supplied courtesy Tourism Western Australia

### Children's Picture Search

Can you find these pictures in this issue? In your own words, describe what is happening in each picture.





## "It Is Exactly What We Needed!"

That is what a mother in Italy exclaimed upon receiving the book *Learn From the Great Teacher*. "I couldn't hold back my tears," she said. Regarding her young daughter, she added: "She can't read yet, but thanks to the pictures, she remembers the main points. She is very attentive because the writing is in the form of a conversation with the reader, and she often joins in. We could not have received a finer gift."

A father in Italy explained that he and his wife had been asking themselves how they were going to explain matters regarding sex to their young son. "When this new publication was released," they said, "we felt that God had perceived our worries. After examining it, we commented on the extent to which this new book would encourage our son to reflect and reason."

A young person in Japan, who had been sexually molested as a child, wrote in appreciation for the book: "I cried profusely and just couldn't stop thanking Jehovah. This book covers frankly and accurately the things that children may face in this wicked age. The questions kindly draw out the heart of a young child. What a wonderful provision chapter 32 is for protecting children from evil adults! My life might have been very different if something like this straightforward educational tool had been available to me 20 years ago."

