

Awake!

JULY 2008



ALSO:
WHY YOU
SHOULD
BEWARE OF
SPIRITISM
PAGE 10

How can you make your
marriage a success?

Awake!

AVERAGE PRINTING 35,754,000
PUBLISHED IN 81 LANGUAGES

How can you make your marriage a success? 3-9

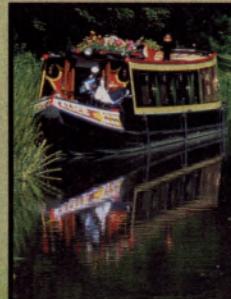
Most marriages have their ups and downs. But how can you keep your marriage happy and stable? The Bible provides practical solutions.

- 3 Marriages in Distress
- 4 What Can Go Wrong?
- 6 How to Build a Successful Marriage
- 12 Will Earth Sustain Future Generations?
- 18 Meet the Curious Coati
- 19 Young People Ask
How Can I Make Worship
of God Enjoyable?
- 22 A Taste of Thailand
- 24 The Tiny Treasures of Niihau
- 26 Was It Designed?
Your Sense of Taste
- 27 Living With Albinism
- 30 Watching the World
- 31 How Would You Answer?
- 32 "It Is Simply Wonderful!"



Why You Should Beware of Spiritism 10

Curiosity impels many to dabble in different forms of spiritism. What are the dangers? How does God view spiritism?



Britain's Canals —Still Fascinating 13

These 19th-century canals, formerly neglected, have been restored as unique tourist attractions.

Courtesy of British Waterways

Marriages in distress

"I just can't take it anymore!"

Have you ever heard people say that about their marriage?

If you are married, have you at some time had a similar feeling?

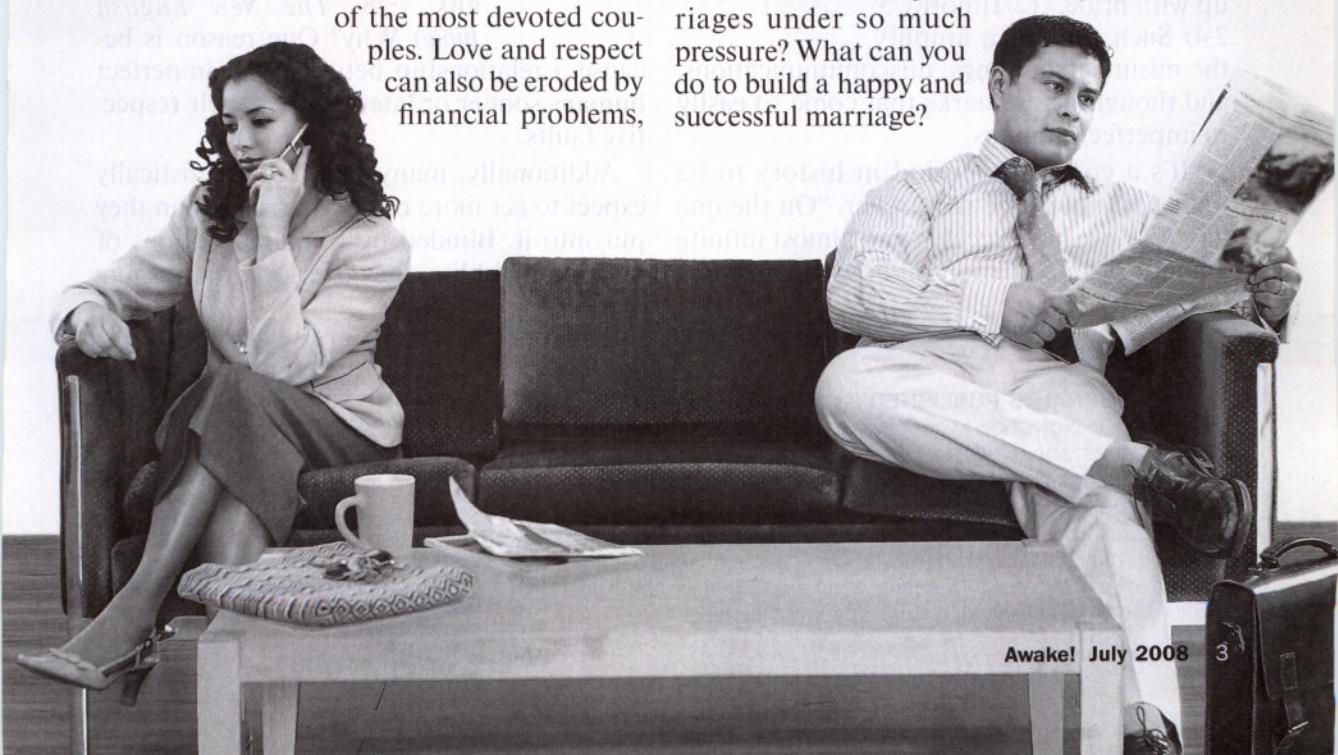
THOUSANDS of couples began married life in the warm glow of love—or in the heat of passion—and expected happiness to follow. "But by the time they came to see me many had reached the depths of despair," reflected one counselor. "They had become disillusioned with their partner, with marriage, with love, and sometimes even with life." Many of those couples have little more in common than a marriage certificate and the dwelling they share.

Some marriages are casualties of mounting stress and anxiety. Demanding jobs, shift work, and long working hours can sap the emotional reserves

of the most devoted couples. Love and respect can also be eroded by financial problems,

issues with children, the move to a new home, job changes, and health problems. Simply stated, the changes that come with the passing of time may create the kind of stress that can push couples apart.

Many mothers do the equivalent of two full-time jobs—one at the workplace, the other at home. This can make them cut back on everything except their employment and caring for the children. Stress and exhaustion leave marriage mates very little time for each other. Many thus feel as if they were being sucked into a vortex of frustration and alienation. Why are so many marriages under so much pressure? What can you do to build a happy and successful marriage?



What can go wrong?

IT IS unrealistic to expect a marriage to be problem-free. After all, even well-matched marriage mates are not perfectly compatible. Hence, difficulties of some sort are inevitable. Just as rust can corrode metal under a coat of paint, a number of factors can eat away at a marriage. To understand what can be done to improve a marriage, let us first examine some of the things that can go wrong.

Times of Great Stress

The Bible predicted that many people in our time would be “lovers of themselves, lovers of money, self-assuming, haughty, . . . unthankful, disloyal, having no natural affection, not open to any agreement, slanderers, without self-control, fierce, without love of goodness, betrayers, headstrong, puffed up with pride.” (2 Timothy 3: 2-4) Such traits can amplify the misunderstandings, miscommunications, and thoughtless remarks that come so easily to imperfect humans.

“It’s a confusing period in history to be married,” notes one researcher. “On the one hand . . . , we have access to an almost infinite amount of information on how to make our

marriages stronger . . . On the other hand, we are faced with a host of social and economic forces which strain our capacity to have good marriages.”

Unrealistic Expectations

“Unrealistic expectations,” explains a marriage therapist, “are one of the biggest causes of dissatisfaction in marriage.” Many married people become disillusioned when they discover that marriage is not all they had expected and that their spouse is not quite what they had envisioned him or her to be. They find themselves mired in disillusionment over a mate’s previously unseen faults or over failings more serious than they had anticipated.

The Bible, though, candidly admits that marriage can bring “pain and grief.” (1 Corinthians 7:28, *The New English Bible*) Why? One reason is because a relationship between two imperfect humans sooner or later exposes their respective faults.

Additionally, many people unrealistically expect to get more out of marriage than they put into it. Blinded by romantic notions of matrimonial bliss, they overlook the respon-

Some couples hear without listening and speak without communicating

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.

Publication of *Awake!* is part of a worldwide Bible educational work supported by voluntary donations. Unless otherwise indicated, Scripture quotations are from the modern-language *New World Translation of the Holy Scriptures—With References*.

Awake! (ISSN 0005-237X) is published monthly by Watchtower Bible and Tract Society of New York, Inc.; M. H. Larson, President; G. F. Simonis, Secretary-Treasurer; 25 Columbia Heights, Brooklyn, NY 11201-2483. Periodicals Postage Paid at Brooklyn, N.Y., and at additional mailing offices. **POSTMASTER:** Send address changes to *Awake!*, 1000 Red Mills Road, Wallkill, NY 12589-3299. © 2008 Watch Tower Bible and Tract Society of Pennsylvania. All rights reserved. Printed in U.S.A.



sibility and hard work needed to build a happy marriage. They set themselves up for a tragic encounter with reality that is likely to leave them disappointed and bewildered. Often, the more inflated the delusions are about marriage, the greater the disenchantment is once reality hits home.

Communication Crisis

What communication errors can be avoided in order to forge a stronger marital relationship? Some couples get into a rut of hearing without listening and speaking without communicating. Warm and affectionate interaction is replaced by curt, cold routine. Purposeful, open dialogue tends to be overwhelmed by incessant arguments about anything, everything, and nothing. Misinterpretation generates misunderstandings; verbal attacks are countered with icy silence.

Sadly, many marriage mates either fail to notice their spouse's positive behavior or notice it but fail to express their appreciation. In addition, in the present work climate, many married women become resentful because they are left to do most of the work at home in addition to holding down a secular job. Moreover, many wives feel that their emotional needs are being ignored.

What can you do to build a successful marriage? Consider the following practical advice from the Bible.

Many expect to get more out of marriage than they put into it



Languages: Afrikaans, Albanian, Amharic, Arabic, Armenian, Bosnian, Bulgarian, Cebuano, Chichewa, Chinese, Chinese (Simplified), Chitonga, Cibemba, Croatian, Czech, [#] Danish, ⁺ Dutch, ⁺ English, ⁺ Estonian, Ewe, Fijian, Finnish, ^o French, [#] ⁺ Georgian, German, [#] ⁺ Greek, Gujarati, Hiligaynon, Hindi, Hungarian, Icelandic, Igbo, Iloko, Indonesian, Italian, [#] ⁺ Japanese, [#] Kannada, Kirghiz, Korean, [#] ⁺ Latvian, Lingala, Lithuanian, Luvale, Macedonian, Malagasy, Malayalam, Maltese, Myanmar, Norwegian, ⁺ Polish, [#] Portuguese, [#] ⁺ Punjabi, Rarotongan, Romanian, Russian, [#] ⁺ Samoan, Sepedi, Serbian, Sesotho, Shona, Silozi, Sinhala, Slovak, Slovenian, Spanish, [#] ⁺ Swahili, Swedish, ⁺ Tagalog, Tamil, Thai, Tok Pisin, Tongan, Tsonga, Tswana, Turkish, Ukrainian, Urdu, Vietnamese, Xhosa, Yoruba, Zulu

[#] Audiocassettes also available.

⁺ CD also available.

^o MP3 CD-ROM also available.

Would you welcome more information or a free home Bible study? Please send your request to Jehovah's Witnesses, using one of the addresses below. For a complete list of addresses, see www.watchtower.org/address. **America, United States of:** 25 Columbia Heights, Brooklyn, NY 11201-2483. **Australia:** Box 280, Ingleburn, NSW 1890. **Bahamas:** Box N-1247, Nassau, N.P. **Britain:** The Ridgeway, London NW7 1RN. **Canada:** P.O. Box 4100, Georgetown, ON L7G 4Y4. **Germany:** Am Steinfeil, 65618 Seelters. **Guam:** 143 Jehovah St., Barrigada, GU 96913. **Guyana:** 352-360 Tyrell St., Republic Park Phase 2 EBD. **Hawaii:** 2055 Kamehameha IV Road, Honolulu, HI 96819. **Jamaica:** P.O. Box 103, Old Harbour. **Japan:** 4-7-1 Nakashinden, Ebina City, Kanagawa Pref., 243-0496. **Puerto Rico:** P.O. Box 3980, Guayanabo, PR 00970. **South Africa:** Private Bag X2067, Krugersdorp 1740. **Trinidad and Tobago, Republic of:** Lower Rapsey Street & Laxmi Lane, Curepe.

How to build a successful marriage

MARRIAGE can be likened to a journey, an odyssey that presents many surprises—some exquisite, others painful. Unforeseen “terrain” can present unexpected obstacles, some of which may seem insurmountable. Nevertheless, many people make this journey successfully and happily, with only minor mishaps. Indeed, success in marriage is not measured so much by the highs and lows of the journey as it is by how couples deal with those ups and downs.

What do you think can make the journey through marriage more successful and enjoyable? Many couples feel the need for a ‘marital road map’ to direct them along the way. The most dependable and authoritative “map” for marriage is provided by the Originator of marriage—Jehovah God. His inspired Word, the Holy Bible, though, is not a magic charm. Rather, it contains practical direction that married couples need to follow to enjoy a successful marriage.—Psalm 119:105; Ephesians 5:21-33; 2 Timothy 3:16.

Let us identify some of the Scriptural signposts—key Bible principles—that can help guide you along a successful and happy marital journey.

► **Treat marriage as sacred.** “What God has yoked together let no man put apart.” (Matthew 19:6) The Creator instituted the marriage arrangement when he introduced the first man, Adam, to his wife, Eve. (Genesis 2:21-24) Christ Jesus, who had been an eyewitness to this event during his prehuman existence, confirmed that Adam and Eve’s marital union was intended to be the start of a

The Bible is like a map for the journey through marriage

lasting relationship. He said: “Did you not read that he who created them from the beginning made them male and female and said, ‘For this reason a man will leave his father and his mother and will stick to his wife, and the two will be one flesh?’ So that they are no longer two, but one flesh. Therefore, what God has yoked together let no man put apart.”—Matthew 19:4-6.

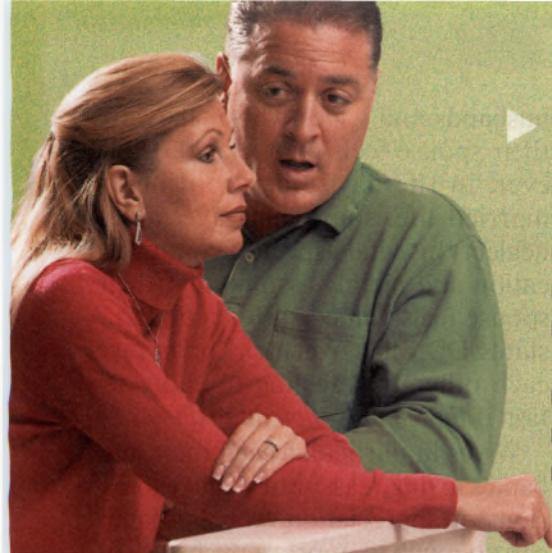
In saying “what God has yoked together,” Jesus was not suggesting that marriages are made in heaven. Rather, he was confirming that the marriage relationship was instituted by God himself and was therefore to be treated as sacred.*

Of course, husbands and wives would not want to be “yoked together” in a cold, loveless coexistence. Rather, they want to enjoy a contented marriage in which both can thrive. They can be happily “yoked together” if they apply the Creator’s practical advice found in the Bible.

Because all of us are imperfect, misunderstandings and differences are inevitable. Often, however, a successful marriage depends less on compatibility than on how couples deal with incompatibility. Therefore, one of the most essential skills in marriage is the ability to resolve disagreements in a loving way, for love “binds everything together in perfect harmony.”—Colossians 3:14, English Standard Version.

► **Speak respectfully.** “There exists the one speaking thoughtlessly as with the stabs of a sword, but the tongue of the wise ones is a

* Jesus stated that the only ground for the dissolution of a marriage with the freedom to remarry is fornication—sexual relations outside the marriage.—Matthew 19:9.



► When you need to **discuss** a problem

- Schedule a time when neither of you is tired.
- Avoid criticizing; be positive toward each other.
- Avoid interrupting; take turns listening and talking.
- Acknowledge your spouse's feelings.
- Express empathy for each other, even when you disagree.
- Be reasonable and flexible.
- Humbly apologize when you are mistaken.
- Express appreciation and affection.

healing." (Proverbs 12:18) Researchers have found that most conversations end the way they start. Hence, if a conversation starts respectfully, it is more likely to end that way. Conversely, you know how hurtful it can be when a loved one speaks thoughtlessly to you. Therefore, make a prayerful effort yourself to speak with dignity, respect, and affection. (Ephesians 4:31) "Even though we see each other's weaknesses," explains a Japanese wife named Haruko,* married for 44 years, "we try to respect each other in word and attitude. That has helped us build a successful marriage."

► **Cultivate kindness and compassion.** "Become kind to one another, tenderly compassionate." (Ephesians 4:32) When there are strong disagreements, it is easy for anger to beget anger. In Germany, Annette, married happily for 34 years, admits: "It is not easy to keep calm under stress—you tend to say things that upset your partner, which only makes things worse." By striving to be kind and compassionate, however, you can do much to help smooth the road to a peaceful marriage.

► **Show humility.** "[Do] nothing out of contentiousness or out of egotism, but with lowliness of mind considering that the others are

superior." (Philippians 2:3) Many conflicts arise because marriage mates pridefully try to blame their partners for problems instead of humbly seeking ways to make things better for each other. Lowliness of mind, or humility, can help you suppress the urge to insist on being right in a disagreement.

► **Do not hastily take offense.** "Do not hurry yourself in your spirit to become offended." (Ecclesiastes 7:9) Try to avoid the inclination to refute your mate's viewpoint or to leap to your own defense if your mate questions something you have said or done. Instead, listen to and acknowledge your mate's expressions. Think carefully before making a reply. Many couples learn too late in life that winning a heart is a greater victory than winning an argument.

► **Know when to keep quiet.** "Be swift about hearing, slow about speaking, slow about wrath." (James 1:19) Good communication is without a doubt one of the most important signposts on the road to marital happiness. Why, then, does the Bible say that there is "a time to keep quiet"? (Ecclesiastes 3:7) This can be a time to do active, purposeful listening—a vital part of communication that involves finding out what your marriage mate really feels and why he or she feels that way.

* Some names in this article have been changed.



► For a **successful** marriage

- Cling to Bible truths that strengthen marriage.
- Make time for your marriage and your mate.
- Promote warmth, love, and affection.
- Be trustworthy and committed.
- Be kind and respectful.
- Share the workload at home.
- Contribute to mutually satisfying conversations.
- Share humor and relaxation.
- Keep working at strengthening your marriage.

► **Listen with empathy.** “Rejoice with people who rejoice; weep with people who weep.” (Romans 12:15) Empathy is indispensable to purposeful communication because it enables you to feel your spouse’s deepest emotions. It can help create an atmosphere in which each one’s opinions and feelings are treated with respect and dignity. “When we talk about our problems,” confides Nella in Brazil, married for 32 years, “I always listen very carefully so I can understand Manuel’s thoughts and feelings.” When your spouse is speaking, it is your “time to keep quiet” and to listen with empathy.

► **Make a habit of expressing appreciation.** “Show yourselves thankful.” (Colossians 3:15) Strong marriages are characterized by

husbands and wives who make sure their spouse feels appreciated. However, in the day-to-day routine of married life, some marriage mates neglect this vital aspect of communication and merely assume that their spouse feels valued. “Most couples,” states Dr. Ellen Wachtel, “could give each other that feeling of appreciation if *they simply thought to do so.*”

Wives in particular need their husband’s loving reassurance and expressions of appreciation. You husbands can do much to improve the health of your marriage and the well-being of your wife, as well as yourself, by making a point of commenting appreciatively on your wife’s positive actions and qualities.

Both verbal and nonverbal reassurances are essential. When you husbands give your wife a gentle kiss, a kind touch, and a warm smile, it says more than just “I love you.” It reassures her that she is special to you and that you need her. Give her a phone call or an electronic message and tell her, “I’m missing you” or “How is your day going?” If since your courting days, you have begun to neglect making such expressions, it is a practice well worth reviving. Continue to learn what touches your spouse’s heart.

The words of the mother of King Lemuel of ancient Israel are so appropriate: “Her husband praises her, ‘Many women have done well, but you surpass them all.’” (Proverbs 31:1, 28, 29, *Tanakh—The Holy Scriptures*) When was the last time you praised your wife? Or, wife, you your husband?

► **Be quick to forgive.** “Let the sun not set with you in a provoked state.” (Ephesians 4:26) In marriage you cannot escape your own faults or those of your spouse. Consequently,

the willingness to forgive is essential. Clive and Monica, in South Africa, married 43 years ago, have found this Biblical advice very helpful. "We try to put into practice the principle found at Ephesians 4:26," explains Clive, "and we try to be quick to forgive each other, knowing that it pleases God. Then we feel good about the situation, go to bed with a clean conscience, and sleep well."

An ancient proverb wisely observes: "It is beauty . . . to pass over transgression." (Proverbs 19:11) Annette, mentioned previously, agrees, adding: "A good marriage is impossible without forgiveness." She explains why: "Otherwise resentment and mistrust grow, and that is poison for a marriage. Through forgiveness, the bonds of your marriage are strengthened and you grow closer together."

If you have hurt your spouse's feelings, do not simply conclude that he or she will just get over it. Making peace often requires that you do one of the more difficult things marriage mates need to do: Admit that you have made a mistake. Nevertheless, find a way humbly to say something like this: "I'm sorry, Dear. I made a mistake." A humble apology will win you respect, help build a trusting relationship, and enhance your own peace of mind.

► **Stay committed to your mate and to your marriage.** "They [the husband and wife] are no longer two, but one flesh. Therefore, what God has yoked together let no man put apart." (Matthew 19:6) You have solemnly vowed before God and man and to each other to remain together, despite problems that might arise.* Commitment, however, is not simply a legalistic obligation. Rather, it is motivated by sincere, heartfelt love

* The Bible allows an innocent mate the right to decide whether to divorce an adulterous spouse. (Matthew 19:9) See the article "The Bible's Viewpoint: Adultery—To Forgive or Not to Forgive?" in the August 8, 1995, issue of *Awake!*

and is a reflection of respect and honor for each other and for God. So never undermine your sacred marital relationship by flirting; have eyes only for your mate.—Matthew 5:28.

► **Self-sacrifice reinforces commitment.**

"[Keep] an eye, not in personal interest upon just your own matters, but also in personal interest upon those of the others." (Philippians 2:4) Putting your marriage mate's needs and preferences ahead of your own is one of the ways to strengthen commitment. Premji, married for 20 years, makes a point of helping his wife, who is employed full-time, with the housework. "I help Rita with cooking and cleaning and other work so that she has time and energy to do the things she enjoys."

Effort Brings Rewards

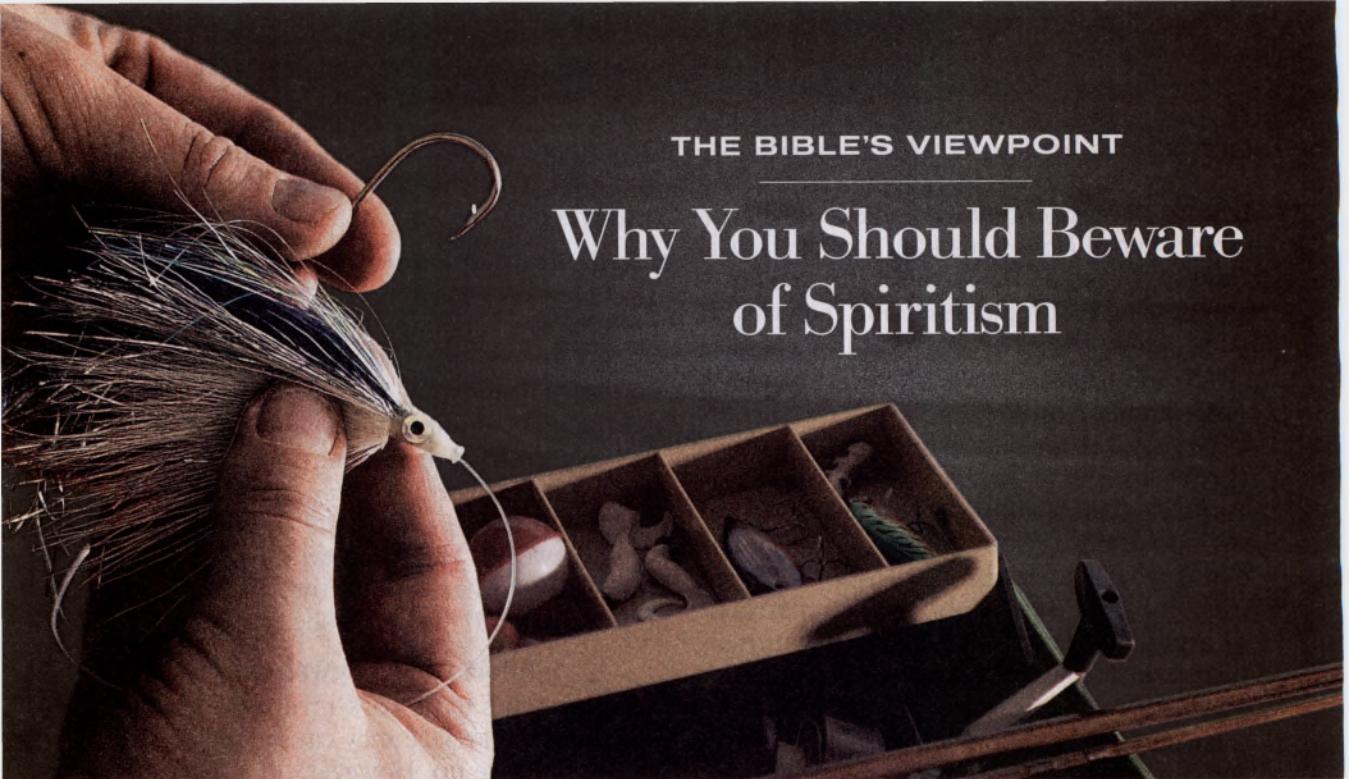
At times, the hard work involved in building a happy marriage may cause some to be tempted to give up. However, do not let upsets make you abandon your commitment or forfeit everything that you have already invested in your marriage, the distance you have already covered in your journey together.

"If you put forth sincere effort and show that you want your marriage to succeed, you can enjoy Jehovah's blessing," suggests Sid, whose marriage has flourished for 33 years. Your loyal support of each other through the difficult times and your mutual enjoyment of the good times will sustain you on a satisfying journey through a successful marriage.

► **For personal reflection**

- What do I need to work on most in my marriage?
- What steps will I take to do this?





Why You Should Beware of Spiritism

IN AN Asian land, a crowd revels during a festival honoring spirits. The festivities heighten when two women are selected for a spirit-possession ceremony. Their eyes roll back in their heads, and then the women begin to shake all over as if shocked by electricity.

In Puerto Rico, a medium (*santero*) holds a séance to contact a spirit called Changó, the god of thunder. The medium describes visions, and all in the room begin to shake as if possessed.

Involvement with the occult is commonplace in many lands. Belief in the supernatural is becoming more popular, and people are increasingly drawn to it. Books, games, television shows, and movies that feature demons, witchcraft, and paranormal phenomena are more widespread than ever.

The Bible, however, teaches that involvement with any manifestation of the occult is actually spiritism. Spiritism is not innocent or harmless fun. It is not simply exploring the unknown. It is contact with demons, wicked

angels who rebelled against God.—Revelation 12:9, 12.

In reality, spiritism does for the demons what lures do for fishermen. A fisherman uses a variety of lures to catch different kinds of fish. Similarly, wicked spirits use different forms of spiritism to bring all sorts of people under their influence. The leader of the demons is referred to as “the god of this [wicked] system of things.” He is successful at blinding the minds of unbelievers to the truth of God’s Word and purpose.—2 Corinthians 4:4.

Where Spiritism Leads

The goal of wicked spirit creatures is simply this: They want to distract and mislead us from developing a personal relationship with our Creator. They influence people to disobey God’s righteous requirements, whether knowingly or unknowingly. Therefore, spiritism leads to divine disapproval, hopelessness, and eventual destruction.—Revelation 21:8.

Says Luis, who is from Puerto Rico: “From the time I was a child, my family was involved

in spiritism. It was part of our family religion and way of life. I thought my ability to foresee the future and read tarot cards was natural. I could often pick lottery numbers and help others win money. These supposed gifts were nothing more than a distraction keeping me from gaining Bible knowledge and building a relationship with God.”—John 17:3.

Many may feel that involvement with the spirit world is harmless, even beneficial. They may speak of so-called friendly ghosts or claim that spiritistic practices can lead to enlightenment, riches, or happiness. This could not be further from the truth. “There is always a price to pay,” says Luis.

A young man named Chad started to experience fearful sights and the torment of being

◀ ***In reality, spiritism does for the demons what lures do for fishermen***

awakened every time he slept. “Demons began harassing and torturing me every night,” he says. How can we be protected against such harassment?

How We Gain Protection

To protect ourselves we need to keep free from everything connected with spiritism. (Galatians 5:19-21) Thus, Jehovah God directs his servants to avoid the following practices: “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 or anyone

who inquires of the dead. For everybody doing these things is something detestable to Jehovah.”—Deuteronomy 18:10-12.

In harmony with those words, many have taken steps to protect themselves by discarding any books or other objects related to spiritism. Says Ken, who broke free from spiritism, “I went through all my belongings and destroyed everything I felt was bad.”—See Acts 19:19, 20.

The greatest protection is developing a personal relationship with the true God, Jehovah. Note the course of action outlined at James 4:7, 8: “Subject yourselves, therefore, to God; but oppose the Devil, and he will flee from you. Draw close to God, and he will draw close to you. Cleanse your hands, you sinners, and purify your hearts, you indecisive ones.”

Jehovah God educates and protects those who draw close to him. They are not ‘ignorant of Satan’s designs’ or deceived by false appearances. (2 Corinthians 2:11; 11:14) Also, Jehovah is Almighty. When called upon in faith, Jehovah will free individuals from harassment by wicked spirits. Chad, quoted earlier, says, “Knowing the source of my attacks and calling out to Jehovah God to protect me from their influence made it stop.”—Psalm 91:1, 2.

Clearly, righthearted ones can rejoice in God’s protection now and the realization that soon the demons and all who submit to their influence will be destroyed. Just imagine the joy and peace that will prevail on earth when mankind is free of the effects of spiritism! —Isaiah 11:9; Revelation 22:15.

HAVE YOU WONDERED?

- What spiritistic practices must Christians avoid?
—Deuteronomy 18:10-12; Revelation 21:8.
- Who promotes spiritism?—2 Corinthians 2:11; 11:14; Revelation 12:9, 12.
- How can we protect ourselves from wicked spirits?—James 4:7, 8.

WILL EARTH SUSTAIN FUTURE GENERATIONS?

BY AWAKE! WRITER IN CANADA



■ After four years of making a comprehensive study of the world's major ecosystems, a group of scholars and environmental leaders—who were part of a study called the Millennium Ecosystem Assessment [MA]—published their first report. Some of the conclusions they reached follow: During the past half century, the growing demand for food, freshwater, timber, fiber, and fuel has caused unprecedented changes in earth's ecosystems, straining earth's ability to sustain future generations. Earth's natural ability to pollinate crops, provide air conditioning by wild plants, and recycle nutrients by the oceans is being overtaxed. The planet is also at the edge of a massive wave of species extinctions.

"Humans are damaging the planet at such an unprecedented rate that they are raising the risk of abrupt collapses in nature that could spur disease, deforestation or dead zones in the seas," said the *Globe and Mail* newspaper of Canada. The paper added: "The wetlands, forests, savannahs, estuaries, coastal fisheries and other habitats that recycle air, water and nutrients for all living creatures are being irretrievably damaged." While the conclusion of the MA board of directors agrees that it lies within the power of human societies to ease the strains that are being put on the ecosystems, they say that achieving it "will require radical changes in the way nature is treated at every level of decision-making."

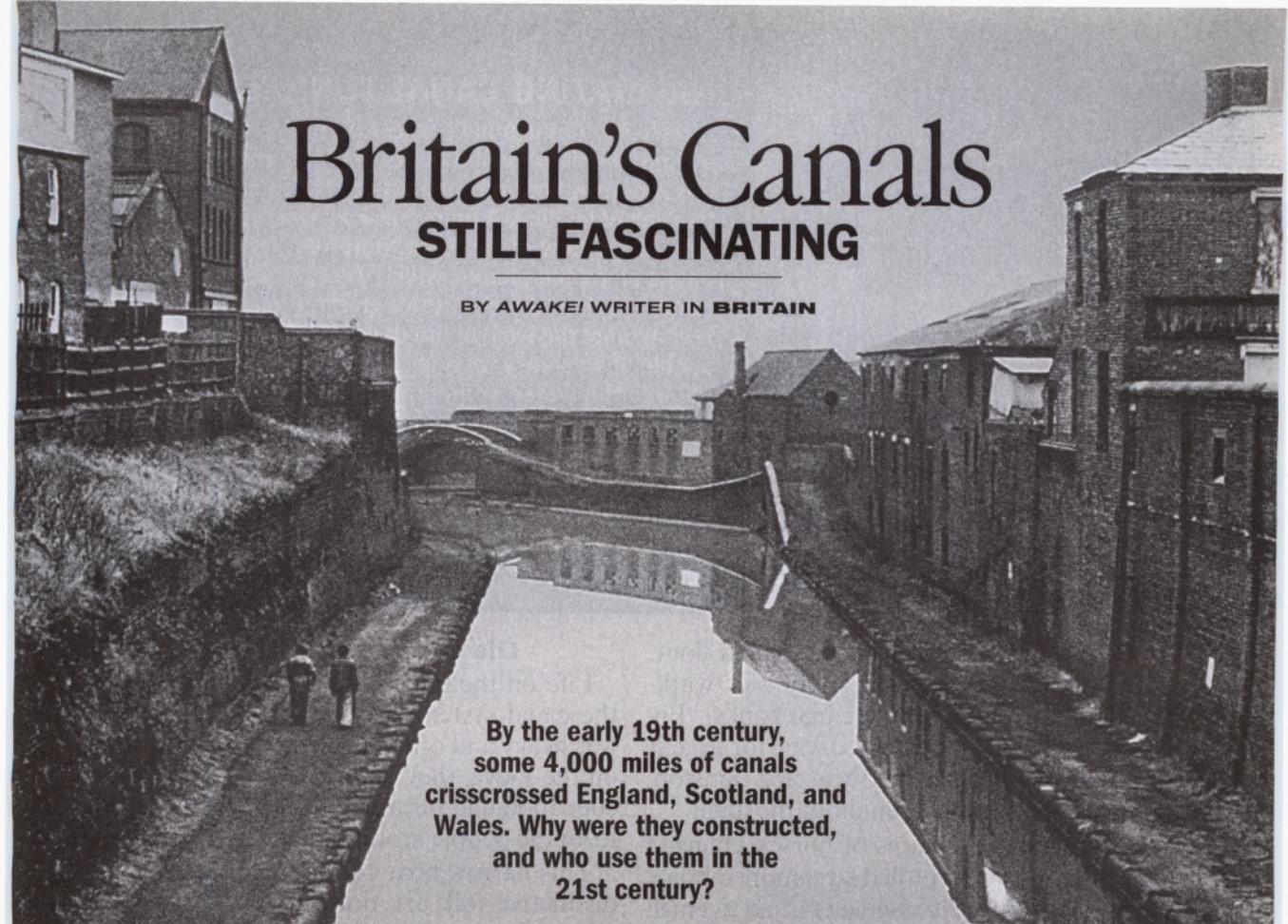
Can planet Earth be saved? The answer is a resounding yes! As caretakers of God's creation, we should do our best to respect the environment. (Psalm 115:16) However, only through divine intervention will the ecosystems be brought back into balance. Our "Grand Maker" promises that he will turn his attention to the earth and "give it abundance." (Job 35:10; Psalm 65:9-13) This includes the seas and everything in them because as the Creator, Jehovah God has power over the seas. (Psalm 95:5; 104:24-31) And what he promises is sure to come true because God "cannot lie."—Titus 1:2.

To know that earth will sustain future generations is most reassuring. This moves all who fear God to praise him for his abundant wisdom, power, and goodness and to laud him for all his love for his creative works.—Psalm 150:1-6.

Globe: NASA photo

Britain's Canals STILL FASCINATING

BY AWAKE! WRITER IN BRITAIN



By the early 19th century,
some 4,000 miles of canals
crisscrossed England, Scotland, and
Wales. Why were they constructed,
and who use them in the
21st century?

BRITAIN'S 18th-century industrial revolution demanded a cheap and speedy system for transporting raw materials and finished goods. Prior to that time, teams of horses had been used to carry packs or haul wagons over roads that in winter became so heavily rutted and deep in mud that they were impassable. On the other hand, one horse alone could smoothly and quickly tow a canal boat carrying as much as 30 tons.

In 1761 the Duke of Bridgewater had a canal constructed to transport coal from his mines to customers in Manchester, ten miles away. This not only brought financial gain to the duke but also halved the cost of Manchester's coal. By 1790 a more ambitious scheme, the Grand Cross canal system, eventually

linked four important rivers and connected England's industrial heartland to seaports. Britain's canal age had begun.

Construction and Use

Skilled engineers, among them James Brindley, a self-taught man who undertook all his works without any written calculations or drawings, developed ingenious methods of construction to channel water across miles of varied terrain. The resulting aqueducts, tunnels, locks, and bridges built by teams of laborers known as navigators, or navvies, are still seen as remarkable achievements.

"Narrow boats," open wooden vessels about 70 feet long and 7 feet wide, were built to carry bulk freight, such as coal, lime,

Courtesy of British Waterways



NAVIGATING CANAL TUNNELS

Very few tunnels have a tow path. So before the advent of self-propelled boats, the only means of getting a narrow boat through was by the dangerous practice called legging. A pair of planks was fitted to each side of the bow of the boat. Boatmen lying on their backs along the planks, which they gripped with their hands, pushed the boat through the tunnel using their feet against the wall. In the darkness, lit only by a single candle, it was easy for a legger to miss his footing and fall into the water, sometimes being fatally crushed between the hull and the tunnel wall. Britain's canal network once had 42 miles of tunnels, and professional leggers were employed on the longer ones. The longest tunnel, now reopened at Standedge, Yorkshire, measures three and a quarter miles.

limestone, kaolin, iron ore, bricks, and flour. These boats were drawn by horses walking along towpaths on the canal banks. "Fly boats" provided an express service for urgent or perishable cargoes and traveled nonstop, their crews working throughout the night.

On some canals, teams of horses, changed at regular intervals, pulled streamlined boats carrying up to 120 passengers at an average speed of ten miles an hour. Like the fly boats, they had priority over other craft and, on the Bridgewater Canal, carried a large blade mounted on the bow to cut through the tow rope of any other vessel that got in the way! With the coming of the canals, ordinary people had for the first time the opportunity to travel over long distances cheaply and comfortably.

IN OUR NEXT ISSUE

- Global Warming—Is Planet Earth in Peril?
- Should God Be Worshipped Through Images?
- How Can I Resist Temptation?

Life Aboard a Narrow Boat

Life on the cut, as the boat people called the canal system, was arduous. Their work was heavy and often dangerous. Being always on the move, they had little opportunity for education and became increasingly detached from the people around them.

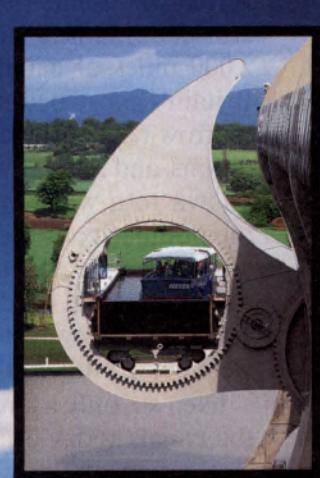
This narrow-boat community developed a distinctive folk art, decorating their vessels with brightly colored landscape scenes, floral motifs, and geometric patterns, which covered the outside boat surfaces and continued into the cabin, located at the stern. These living quarters, measuring just ten feet by seven feet, accommodated the boatman, his wife, and their children. But boat people made up for their lack of space through ingenious fittings concealing foldaway beds and storage lockers. Crocheted lacework hung from the shelves, and fancy china and shining brass ornaments around the cooking stove reflected light. This all conveyed an impression of coziness and warmth. The hardworking boatman's wife, despite her many duties and the dirty cargo so often carried, managed to keep her family and their boat spotless. Even the decorated ropework around the tiller was proudly scrubbed to a brilliant whiteness.

CANAL LOCKS AND AN INGENIOUS BOAT LIFT

Since water cannot travel uphill, what happens when a canal meets rising ground? It can follow a contour line to stay on the same level, which will make the route longer, or perhaps flow along a tunnel cut through the obstruction. As a third option, the waterway can be raised by means of locks. These consist of a chamber linking two water levels, which has a gate at each end. After a boat enters a lock, both gates are closed. The lock is then filled with more water to raise the boat to its next level, or it is emptied to lower the boat—depending on which is needed.

What if former locks cannot be restored? This was the challenge faced in Scotland, where a major project has connected two long-abandoned canals between Glasgow and Edinburgh. It was not feasible to rebuild the flight of 11 locks at Falkirk that once joined the Union Canal with the world's oldest sea-to-sea canal, the Forth and Clyde. The ingenious solution is the Falkirk Wheel of unprecedented design, a rotating boat lift 115 feet in diameter. This wheel can transfer eight vessels, four at a time in two opposing lifts, from one level to the other, each trip taking just 15 minutes.

Described by *The Times* of London as “an astonishing feat of engineering,” the wheel is reflected in a large circular pool, which has moorings for over 20 boats.



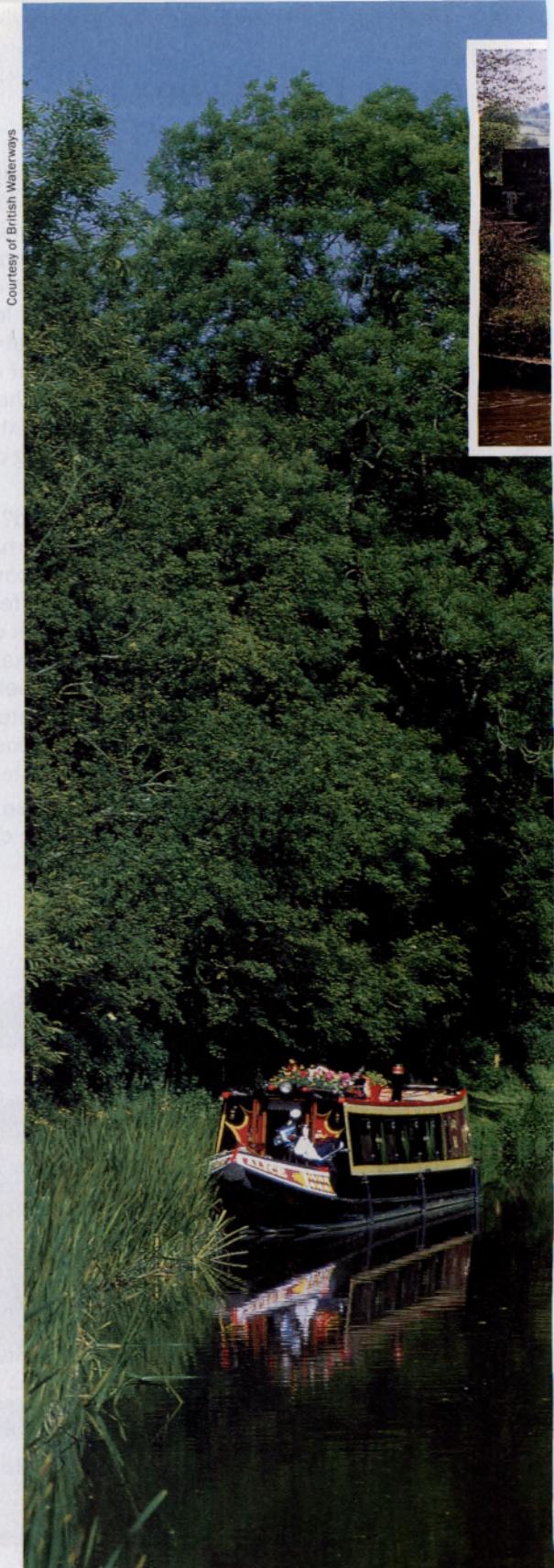
Canal Decline—And Use Today

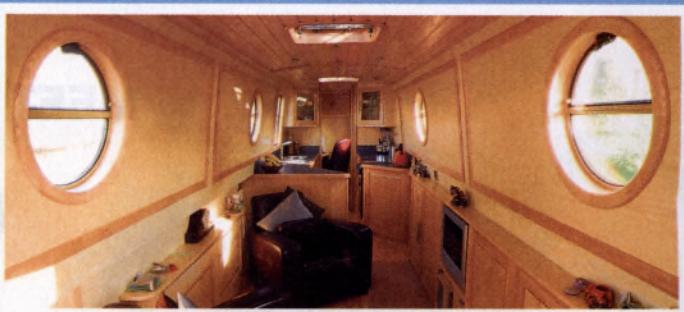
In 1825, as the canal network was nearing completion, George Stephenson opened the Stockton and Darlington Railway, one of the first public railways to use steam locomotives. Within 20 years, railways were taking trade from the canals, which then started to fall into disuse and disrepair. Some were even purchased by railway companies to thwart competition. Following World War I, this decline continued as new and better roads were constructed. Even optimists did not think the canals could survive much longer.

However, thanks to the work of individuals and groups over the past 50 years, that has not been the case. Although some boats traveling along the canals still carry freight, others have been converted for use as permanent homes or vacation cruisers. It is now possible to explore more than 2,000 miles of canals, passing through some of Britain's most beautiful and unspoiled scenery. Narrow-boat enthusiasts have also revived old traditions, and regular waterway festivals make them known to a wider public. Indeed, as a result of the popularity of these brightly decorated leisure craft, there are now more narrow boats on the canals than in the heyday of commercial traffic, and canals are being restored at the same rate as they were being built 200 years ago.

Even so, only a small portion of those enjoying the canals today are boaters. Why? Because the restoration of the waterways created a network of "linear parks." These give recreational access to previously little-known townscapes and countryside for walkers, cyclists, and fishermen, who all make use of the towpaths. Reservoirs built to maintain canal water levels have become important wildlife habitats, and the canals themselves sustain a wide variety of plant, bird, and animal life.

The building of Britain's canals ushered in a dramatic era of change—but one with a curiously ironic twist. The same canals now provide a way of escape from the pressures of the modern-day world they helped to create.





WHY WE ENJOY RIDING THE CANALS

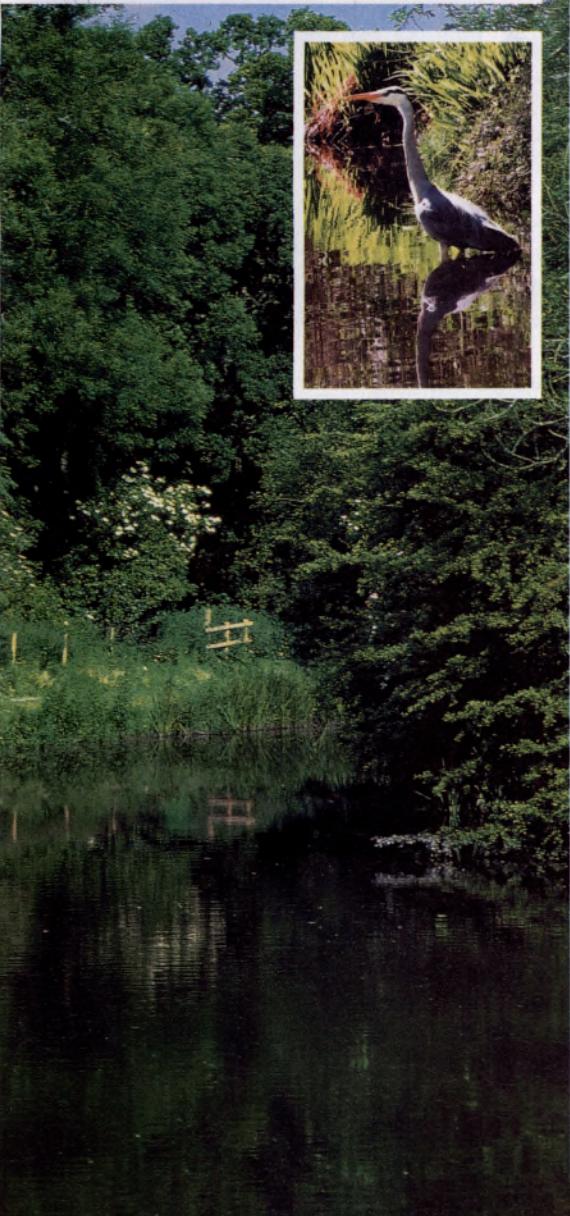
In recent years my wife and I, senior citizens, have enjoyed a tranquil vacation by boating along canals. Why tranquil? First of all, we are away from all the motorway traffic and the lust for speed. In a narrow boat, you can chug along at no more than three miles an hour. Why such a low speed? To avoid creating a wake that might damage the banks of the canal. As a result, people walking their dog along the old tow path will often overtake us!

Another advantage of the slow pace is that we have time to take in the scenery and even say hello to passersby. And the scenery can be magnificent. We usually rent our boat in South Wales on the Monmouthshire and Brecon Canal. It stretches for some 33 miles from the Welsh border up to the Brecon mountains that rise to over 2,900 feet. Every now and then, we get a little excitement when we reach the locks and the boat has to be raised or lowered to a different level.—See the box on page 15.

The boats are fully equipped and extremely comfortable. Some even have two double bedrooms, each with its own shower and toilet. There is also central heating in case of a chilly evening. We normally do our own cooking, but if we feel like taking a break, we can stop and have a tasty meal at one of the eateries that border the canal.

It is all very peaceful, especially early in the morning when the canal is like a mirror, reflecting the trees and the hills. Everything is so quiet that the birdsongs are clearly identifiable. Herons keep a silent vigil on the banks as they slowly and sedately move ahead of us.—Contributed.

Top right: By kind permission of Chris & Stelle on Belle (www.railwayboating.com/belle)





MEET THE CURIOUS

Coati

BY AWAKE! WRITER IN BRAZIL

YOU are casually strolling through the woods when suddenly you notice a band of coatis coming toward you. Frightened, you wonder if they are about to attack. Relax! While coatis have been known to bite, these curious little animals are only looking at the bag you are carrying. Coatis are always searching for something to eat. In fact, they will devour virtually anything they can find, including worms, lizards, spiders, mice, fruits, and even birds' eggs.

The coati is related to the raccoon, but it has a longer body and tail as well as a long, flexible snout. Measuring up to 26 inches—with a tail that is about as long—this tropical American mammal is mainly found from the southwestern United States to northern Argentina.

Females travel in bands of up to 20, while males are loners. Each year during the mating season, one male joins a band of females. Between seven and eight weeks later, the pregnant females leave the band to build tree

nests. Each female will have three or four offspring. About six weeks after giving birth, the new mothers—along with their young—rejoin the band. The baby coatis resemble wobbling little fur balls.

Coatis continually sniff the air and dig their claws into the ground as they wander through the woods. They are hardly a welcome sight to farmers, since they can wreak havoc on corn-fields and in henhouses. When hunted, the coatis know how to take care of themselves. These cunning little creatures make good use of their hideaways in the trees. They also have another means of escape. At the sound of a shot or of hands clapping, they fall to the ground and play dead! By the time the hunter gets close enough to capture them, they are gone!

The next time you visit Brazil, perhaps you will encounter a band of coatis. If so, do not be frightened. They are not likely to hurt you. But they would certainly not mind if you threw some tasty tidbits in their direction!

How can I make worship of God enjoyable?

Josh, 16, is sprawled out on his bed. His mom stands at the doorway. "Joshua, get up!" she says sternly. "You know it's a meeting night!" Josh is being raised as one of Jehovah's Witnesses, and attendance at Christian meetings is a regular part of family worship. Lately, though, Josh hasn't felt inclined to attend.

"Oh, Mom," he groans, "do I really have to go?"

"Stop complaining and get dressed," she replies. "I don't want to be late again!" She turns and starts to walk away.

"Look, Mom," Josh blurts out while she's still within earshot. "This may be *your* religion, but that doesn't mean it's *mine*." He knows his mom heard that, because the sound of her footsteps has stopped. Then, without responding, she continues walking away.

Josh feels a twinge of guilt. He doesn't really want to hurt his mom. But he doesn't want to apologize either. The only thing he can do is . . .

With a sigh, Josh gets out of bed and starts getting dressed. Then he says, more to himself than to his mom: "Sooner or later I'm going to have to make my own decision. I'm not like the others at the Kingdom Hall. I'm just not cut out to be a Christian!"



If your answer is yes to questions like these, don't be discouraged. With a few adjustments, you can learn to enjoy serving God. Let's see how.

Challenge #1: Studying the Bible

Why it's not easy. Maybe you feel you're just not the "studying type." Your attention span seems

HAVE you ever felt the way Josh does in this scenario? At times, does it seem that while others enjoy Christian activities, you're just going through the motions? For instance:

- Is studying the Bible just like another homework assignment to you?
- Do you dread taking part in the door-to-door ministry?
- Do you often find yourself bored at Christian meetings?

short—it's *hard* to sit still and concentrate! Besides, don't you have enough studying to do for school?

Why you should do it. Not only is the Bible inspired of God but it's also "useful for teaching and helping people and for correcting them and showing them how to live." (2 Timothy 3:16, *Contemporary English Version*) Studying the Bible and meditating on what you read can open up a whole new world for you. Let's face it, nothing worthwhile comes

to you without some hard work. If you want to play a sport well, you've got to learn the rules and practice the game. If you want to get fit, you need to exercise. If you want to learn about your Creator, you need to study God's Word.

What some of your peers say. "I came to a crossroads in my life when I got to high school. The kids were doing all sorts of wrong things, and I had to make some decisions: 'Is that what I want to do? Are my parents *really* teaching me the truth?' I had to find out for myself."—Tshedza.

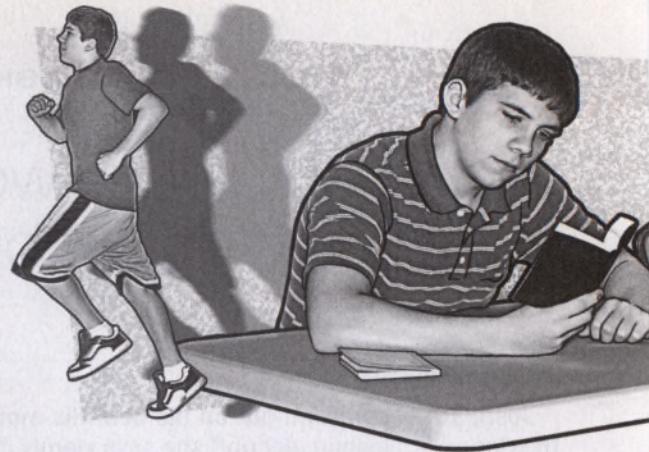
"I always believed that what I had learned was the truth, but I needed to prove it to myself. I had to make it *my own* religion—as opposed to it being just a *family* religion."—Nelisa.

What you can do. Make up your own, customized personal study plan. You get to choose which subjects you'll explore. Where could you start? Why not dig into your Bible and scrutinize your beliefs, perhaps using a book such as *What Does the Bible Really Teach?**

Action plan. To get you started, check two or three of the Bible topics below that you want to learn more about—or, if you like, write in some of your own.

- Is there a God?
- How can I be sure that the Bible writers were inspired by God?
- Why should I believe in creation rather than evolution?
- What is God's Kingdom, and how can I prove its existence?
- How can I explain my belief about what happens at death?
- Why should I be convinced that there will be a resurrection?
- How can I be sure which is the true religion?
-
-
-

* Published by Jehovah's Witnesses.



Challenge #2: Engaging in the Ministry

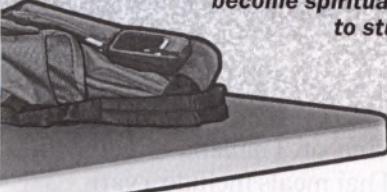
Why it's not easy. Talking to others about the Bible—or encountering a schoolmate while doing so—can be scary.

Why you should do it. Jesus instructed his followers: "Make disciples . . . , teaching them to observe all the things I have commanded you." (Matthew 28:19, 20) But there are further reasons to do it. Studies suggest that in some places the vast majority of teens believe in God and in the Bible. Yet, those same youths have no genuine hope for the future. Through your study of the Bible, you have the very information that many of your peers are searching for and need!

What some of your peers say. "My friend and I prepared effective introductions, and we learned how to overcome objections and how to make return visits. Once I started putting more into my ministry, it became more enjoyable."—Nelisa.

"One Christian sister has helped me out so much! She's six years older than I am, and she takes me out in the ministry with her and sometimes out to breakfast. She showed me encouraging scriptures that helped me to rearrange my thinking. I find that now I reach out to people more because of her wonderful example. I could never repay her!"—Shontay.

What you can do. With your parents' permission, find someone in your congregation who is older than you and with whom you



If you want to become physically fit, you need to exercise. If you want to become spiritually fit, you need to study God's Word

can share in the ministry. (Acts 16:1-3) The Bible states: "By iron, iron itself is sharpened. So one man sharpens the face of another." (Proverbs 27:17) There are many benefits to associating with older ones who have a wealth of experience. "It's actually a relief to be around older ones," says 19-year-old Alexis.

Action plan. Below, write the name of someone in your congregation in addition to your parents who could assist you in the ministry.

Challenge #3: Attending Christian Meetings

Why it's not easy. After sitting in class all day, an hour or two of listening to Bible-based talks might seem like an eternity.

Why you should do it. The Bible exhorts Christians: "Let us consider one another to incite to love and fine works, not forsaking the gathering of ourselves together, as some have the custom, but encouraging one another, and all the more so as you behold the day drawing near."—Hebrews 10:24, 25.

What some of your peers say. "Preparing for congregation meetings is an absolute

must. Sometimes you just have to motivate yourself. When you do prepare, you enjoy the meetings because you know what's being discussed, and you can even participate."—Elda.

"At one point, I began to notice that when I gave comments at the meetings, those meetings became much more interesting to me."—Jessica.

What you can do. Take time to prepare in advance, and if you can, offer a comment. This will help you to feel more a part of what is going on.

To illustrate: What's more enjoyable—watching a sport on television or playing it on the field? Obviously, being a participant is more rewarding than being a spectator. Why not take that approach to Christian meetings?

Action plan. In the space below, write down the time when you can spend just 30 minutes each week preparing for a congregation meeting.

Many youths are experiencing the truthfulness of Psalm 34:8, which says: "Taste and see that Jehovah is good." How satisfying is it to *hear* about a mouthwatering dish? Isn't it better to savor the food for yourself? It's the same with worshipping God. Taste and see for yourself how rewarding it is to participate in spiritual activities. The Bible says that the one who is not just a hearer but a doer of the work "will be happy in his doing it."—James 1:25.

More articles from the "Young People Ask" series can be found at the Web site
www.watchtower.org/ype

TO THINK ABOUT

- Why might spiritual activities seem boring to a teenager?
- Which of the three aspects of worship discussed in this article would you like to work on, and how will you do so?

A Taste of Thailand

BY AWAKE! WRITER IN MALAYSIA

WHILE walking down a crowded street in Bangkok, Thailand, you may suddenly feel pulled in by an irresistible aroma wafting from the side of the street. There, open-air chefs are preparing typical dishes of Thai cuisine. After filling your nose with the tantalizing odors and your eyes with the appealing colors, you might be tempted to taste the succulent food.

The appeal of Thai food comes from a mix of carefully selected herbs, roots, leaves, and seeds. These produce a blend of sweet, sour, salty, bitter, and hot flavors and smells that make it very difficult to walk by without at least taking a taste. How did Thailand come to have such an unusual cuisine? The answer lies in the distant past.

An International Mix of Flavors

Thailand is located at a crossroads of Asia. For centuries Chinese, Laotians, Cambodians, Indonesians, Europeans, and others traveled through Thailand, and many of them took up living there. These people brought the foods of their homelands with them, and the tastes and aromas of all those different victuals have remained in Thailand.

Sometime in the distant past, Indian travelers showed the Thai people how to use curry when cooking. In the 16th century, the Portuguese brought chilies and perhaps toma-

toes. Today, the cuisine of Thailand is very extensive, but most Thai meals include a variety of yellow, green, and red chilies with curry pastes of the same colors. This mixture of curry and chilies gives Thai cuisine the rich flavors characteristic of foods from the East.

Many Courses, Many More Flavors

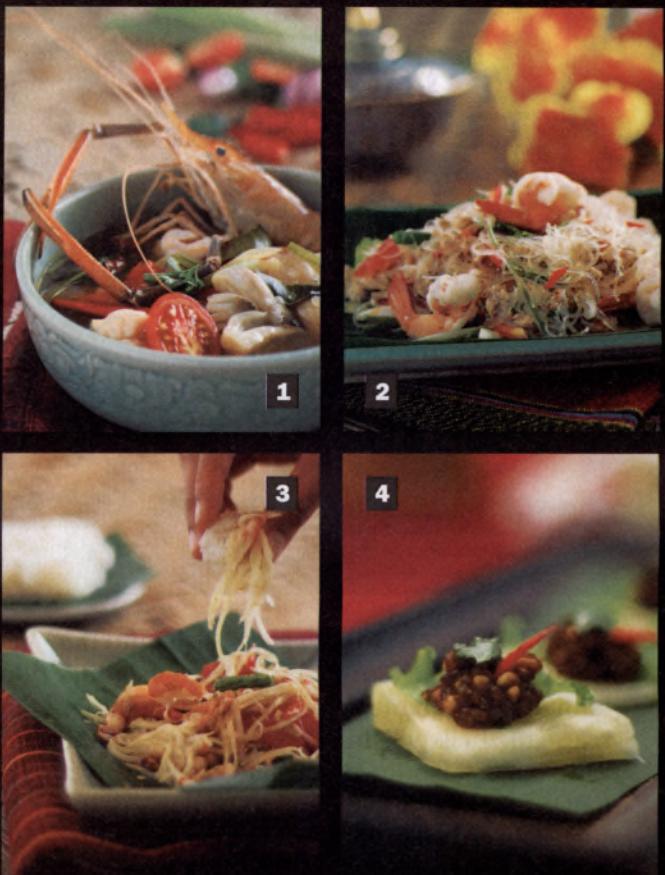
A typical Thai meal consists of different dishes, which may include soup, salad, stir-fry, curry, and dipping sauces. Steaming white rice is always on the table. Then there is dessert, which may include sweets based on sugar and eggs. The coconut meat and coconut milk are also part of the sweet side of Thai cooking.

A key to good food anywhere is fresh ingredients, and in Thailand these are often right around the corner. In the cities and towns, markets sell fresh fruit, vegetables, fish, and such spices as lemon grass, coriander, garlic, ginger, galangal, cardamom, tamarind, and cumin. At such markets you will also find plenty of hot chilies and limes, which are a big part of Thai food.

Whether you are visiting Thailand or wish to taste Thai cooking at home, try *tom Yam goong*, the hot-and-sour shrimp soup that is a specialty of Thailand. Other good choices are spicy papaya salad, glass noodles with roasted chicken or duck, shredded pork, or marinated fish. *Ma ho*, meaning “galloping horses,” is a mixture of pork, prawns, and peanuts heaped on fresh pineapple and garnished with red chilies and coriander leaves. To top off your meal, try a dessert of sticky rice with coconut milk and mangoes.

- 3:32. **7.** David.—Luke 3:31.
Indefinite. **5.** Obed.—Luke 3:1, 32. **6.** Jesse.—Luke
3:32. **7.** David.—Luke 3:31.
3. It is crushed. **4.** God's Kingdom; it lasts to times
indefinite. **5.** Obed.—Luke 3:1, 32. **6.** Jesse.—Luke
3:32. **7.** David.—Luke 3:31.
1. Gold, silver, copper, iron. **2.** Four Kingdoms.

ANSWERS TO PAGE 31



- 1** *Tom Yam goong* soup
- 2** Glass noodles salad with minced pork and shrimps
- 3** Spicy papaya salad
- 4** *Ma ho*
- 5** Sticky rice with coconut milk and mangoes

What is the best way to eat Thai food? In some parts of the country, custom calls for using your fingers to press the specially prepared sticky rice into small balls, which you then dip into sauces and pop into your mouth. When eating noodle dishes, you may prefer to use chopsticks. But if the chopsticks

leave you fumbling, you can always resort to using a fork and a spoon.

Is your appetite now whetted for Thai cuisine? The delicacies of this beautiful Asian country may open up a world of tastes you have not yet explored—that of delicious food from the Orient.

THE TINY TREASURES OF Niihau

BY AWAKE! WRITER IN HAWAII



© drr.net

EVERY winter, storm waves crash onto the coast of Hawaii's "Forbidden Island," Niihau. Vast quantities of empty, miniature sea-snail shells are hurled shoreward by the waves and wash up on certain beaches. Niihau—covering just 70 square miles—is the smallest of the seven inhabited Hawaiian Islands. How fitting, then, that this volcanic island should be home to some of the world's tiniest treasures—the exquisite shells of Niihau.

Unlike Niihau's closest neighbor island, Kauai, 17 miles to the northeast, Niihau is mostly low-lying and arid. But why is it called the Forbidden Island? Niihau is privately owned and closed to uninvited visitors. The self-sufficient residents of the island have no central power plant, no running water, no stores, and no post office. In an effort to preserve their ancient culture, the 230 or so native Hawaiians who live there converse in the Hawaiian language. When they are not tending sheep and cattle, most are involved in tapping their "gold mine" of diminutive shells.*

During the warm Hawaiian winter months,

families walk or bike down dusty roads to the pristine beaches and rocky coves, where they spend long days collecting shells. Once the shells are gathered, they are spread out in the shade to dry. Later, they will be sorted, graded, and strung into delicate leis, or necklaces. On more verdant islands, most leis are made of flowers. On Niihau, shells serve as the "flowers."

"Jewels" From the Sea

Shells have long been used as jewelry in Hawaii. In the late 18th century, seafaring explorers—including Captain James Cook—encountered shell ornaments here and wrote about them in their journals. They also brought back samples, some of which may have come from Niihau. As time went by, Niihau's beguiling leis began to appear around the necks of Hawaii's notable women, including dancers and even royalty. In the 20th century, thanks to curio shops, tourism, and soldiers who passed through Hawaii during World War II, these special "jewels" found a niche in a wider market. Today the lovely necklaces that once graced Hawaii's nobility are worn by admirers in lands near and far.

The shells most often used in making Nii-

* The same types of shells are also found on other Hawaiian Islands and elsewhere in the Pacific, but quantity and quality vary from place to place.

Swirls of "momi" shells



Dried shells are sorted, graded, and strung into delicate leis

hau leis are called *momi*, *laiki*, and *kahelelani* in Hawaiian. Variations in color and pattern present an enjoyable challenge for the leimaker—usually female—who meticulously threads the shells into a work of art. Some 20 different varieties of pearly, oval-shaped *momi* are used, ranging from brilliant white to dark brown. When strung in the highly prized *Lei Pikake* style, the *momi*'s oillike sheen and small size—only 3/8 of an inch in length—produce leis that look much like strands of fragrant white jasmine, or pikake.

Multiple strands of glossy ricelike *laiki* often adorn brides in Hawaii. These lustrous shells vary in hue from pure white and ivory to yellowish beige, with some having brown striations. *Kahelelani* shells, perhaps named after an ancient Hawaiian chief, measure a mere 3/16 of an inch in length. These delicate, turban-shaped shells are the most difficult to string, and leis made from them are the most costly. They range in color from deep burgundy to the rarest color, hot pink, which fetches a price three times that of other colors.

© Robert Holmes



Making a Niihau-Shell Lei

Once the leimaker decides on a pattern, she removes all the sand from the shells and pierces them with a fine-pointed awl. Although she works carefully and skillfully, 1 out of 3 shells breaks. Thus, many extra shells must be on hand just to complete one lei, a process that may take years! To string the lei, she uses a nylon thread stiffened with fast-drying cement or beeswax. Traditionally, a small button-shaped shell, such as a sundial or a *puka*, is attached to each end of the strand, and one or two cowrie shells are added where the ends of the lei are joined together.

There are nearly as many ways of stringing leis as there are variations in the shells themselves. Styles include classic single-strung white *momi* leis ranging from 60 to 75 inches in length, rope leis consisting of hundreds of minute *kahelelani* shells, and garlands woven in symmetrical geometric patterns—some with mixtures of shells and seeds. Leimaking is painstaking, time-consuming, and eye-straining work. But the creative and patient Niihau artisans regularly create intricate leis of uncommon beauty. Each lei is unique, and it is easy to understand why they can rival precious gems and heirloom jewelry in value, some costing thousands of dollars.

Niihau may be relatively bare, sparsely populated, and tucked away in a remote corner of Hawaii. But thanks to its imaginative, artistic leimakers, people far beyond Niihau's sunny shores can share the beauty of treasures of the "Forbidden Island."

WAS IT DESIGNED?

Your Sense of Taste



■ Bite into your favorite food, and immediately your sense of taste is activated. But just how does this amazing process work?

Consider: Your tongue—as well as other parts of your mouth and throat—includes clusters of skin cells called taste buds. Many are located within papillae on the surface of the tongue. A taste bud contains up to a hundred receptor cells, each of which can detect one of four types of taste—sour, salty, sweet, or bitter.* Spicy is in a different category altogether. Spices stimulate pain receptors—not taste buds! In any event, taste-receptor cells are connected to sensory nerves that, when stimulated by chemicals in food, instantly transmit signals to the lower brain stem.

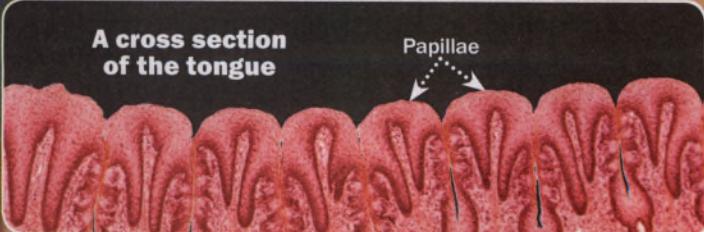
Taste, however, involves more than your mouth. The five million odor receptors in your nose—which allow you to detect some 10,000 unique odors—play a vital role in the tasting process. It has been estimated that about 75 percent of what we call taste is actually the result of what we smell.

Scientists have developed an electrochemical nose that uses chemical gas sensors as an artificial olfaction device. Nevertheless, neurophysiologist John Kauer, quoted in *Research/Penn State*, notes: “Any artificial device is going to be extremely simplistic in comparison to the biology, which is wonderfully elegant and sophisticated.”

No one would deny that the sense of taste adds pleasure to a meal. Researchers are still baffled, though, by what causes people to favor one type of taste over another. “Science may have many of the basics of the human body down,” says *Science Daily*, “but our sense of taste and smell are still somewhat of a mystery.”

What do you think? Did your sense of taste come about by chance? Or is this evidence of design?

* In recent years some scientists have added umami to the list. Umami describes the unique salts of glutamic acid. One of them is, among others, the flavor enhancer monosodium glutamate.



LIVING WITH Albinism

BY AWAKE! WRITER IN BENIN

WHENEVER I fill in a form requesting information about my race, I always mark ‘Black,’ says John, “even though I am whiter than most who check ‘White.’” John, a West African living near the border between Benin and Nigeria, has albinism—a genetic disorder in which one’s eyes, skin, or hair (in some cases one’s eyes alone) have little or no pigmentation. How widespread is albinism? How does it affect an individual’s daily life? What can help those with albinism to live with their condition?*

While albinism is most perceptible among dark-skinned people, it is found among all nations, races, and peoples. It is estimated that albinism affects 1 out of every 20,000 persons.

The defective genes for albinism can be passed on for generations without any of its telltale signs being manifest. This was true in John’s case. None of his relatives can remember any of his ancestors having albinism.

Many attribute the word “albinism” to 17th-century Portuguese explorers. As they sailed along the West African coast, they sighted both black-skinned and white-skinned people. Assuming these represented two different races, they called the black Negroes and the white albinos—Portuguese for “black” and “white” respectively.

Effect on Skin and Eyes

For most light-skinned people, mild exposure to the sun results in a tan when a pig-

ment called melanin is produced to protect the skin. John, however, has oculocutaneous albinism, one of the most common types.* Melanin is missing from his skin, hair, and eyes. How does this affect his skin? Without pigment, an albino’s skin is easily sunburned. Sunburn in itself is an unpleasant and painful condition. However, albinos who do not sufficiently protect their skin also risk developing skin cancer. This is especially so in tropical areas.

Thus, the first line of defense for an albino is to protect the skin with suitable clothing. John, for example, is a farmer. So when he works in the field, he wears a wide-brimmed straw hat and a long-sleeved shirt. Even though he has this protection, he explains: “At times I feel that my whole body is burning from within. When I return home and scratch my arm, skin sometimes peels right off under my fingernails.”

Another option is to wear sunscreen lotion if it is available. A lotion with a sun protection factor of at least 15 is best, and it should be liberally applied 30 minutes before sun exposure and every two hours thereafter.

Albinism can also affect the eyes in a variety of ways. Pigment in the iris normally screens sunlight from entering the eye, other than through the pupil. However, an albino’s iris is nearly translucent, which allows stray light to pass through it and cause irritation. To counter this, many wear a cap, a visor, or UV-protective sunglasses. Others opt

* Albinism is not to be confused with the condition known as vitiligo. See the September 22, 2004, issue of *Awake!* page 22.

* See the accompanying box for a description of some types of albinism.

for tinted contact lenses. John says that on many days he can get by without any protective eyewear. At night, however, he occasionally has discomfort from the glare of automobile headlights.

It is commonly thought that people with albinism have reddish eyes, but this is a misconception. Most albinos have irises tinted either dull gray, brown, or blue. So, then, why do they appear to have red eyes? *Facts About Albinism* says: "Under certain lighting conditions, there is a reddish or violet hue reflected through the iris, which has very little pigment. This reddish reflection comes from the *retina*." This effect might be compared with red-eye, the reddish reflection in the eyes that sometimes appears in photographs taken with a flash.

Abnormalities of the eye are common among albinos. One condition is alteration of the nerves connecting the retina to the brain. The result can be that the eyes do not synchronize properly, causing reduced depth perception. This condition is called strabismus. Treatment may include use of eyeglasses or corrective surgery.

In many countries therapy is either not available or very expensive. How does John live with his strabismus? "I have to be careful," he says. "When I want to cross a road,

I use not only my eyes but also my ears. When I see a car, I know that it is not safe to cross if I can hear it coming."

Nystagmus, an involuntary jittery movement of the eyes, can also result from albinism. This can lead to impaired vision, such as extreme nearsightedness or farsightedness. Glasses or contact lenses can sometimes help the impaired vision, but they do not correct the underlying problem. Some have learned to reduce nystagmus while reading by placing a finger by the eye or by tilting the head.

John's most difficult handicap is, not strabismus or nystagmus, but extreme nearsightedness. "I have to position written material extremely close to my eyes to read," says John, who is one of Jehovah's Witnesses. "However, once I have acquired the right distance, I can actually read quite fast. This is important for my daily Bible reading." He adds: "When I give talks at our Christian meetings, I prepare well so as not to be too dependent on my notes. I am very happy that the large-print edition of *The Watchtower* also appears in my language, Yoruba."

For a child with ocular albinism, going to school can be a test. Parents who take the initiative and consult the teacher or school authorities in advance can often find practi-

SOME TYPES OF ALBINISM

The main categories of albinism include the following:

Oculocutaneous albinism. The pigment melanin is missing from the skin, the hair, and the eyes. There are about 20 variants of this type.

Ocular albinism. Its effects are limited to the eyes. The skin and the hair usually appear normal.

There are many other forms of albinism that are less well-known. For instance, one type is associated with Hermansky-Pudlak syndrome (HPS). Those with HPS have a tendency to bruise or bleed easily. There is a high concentration of this type of albinism in the Puerto Rican population, where the frequency is estimated to be 1 in 1,800 of the population.

cal aids. In some schools, for instance, high-contrast written material, large-type textbooks, and audio tapes are available. With good cooperation among parents, teachers, and school directors, a child with ocular albinism can make a success of his school years.

Social Challenges

Most people with albinism learn how to live with their physical limitations. Many, however, find it difficult to endure the social stigmatization that comes with the condition. This can be especially challenging for children.

In some parts of West Africa, children with albinism are jeered or mocked with racist expressions. In some Yoruba-speaking areas, they are called "Afin," meaning "horrible." Usually, adults are not ridiculed as frequently as children. Although life in West Afri-

ca is generally spent outdoors, some albinos choose to remain indoors. This can easily lead to feelings of rejection and uselessness. That is how John felt until he learned the truth of God's Word. Following his baptism in 1974, his whole outlook on life changed. John had been isolating himself at home, but he realized that he had a responsibility to go out and preach to others about the wonderful hope that he had acquired. He says, "Their spiritual situation is much more serious than my physical condition." Does anyone make fun of him in the ministry? "Once in a while someone who is adamantly opposed to the Bible's message will use my appearance as a reason to poke fun at me," explains John. "This does not bother me because I realize that it is the message and not me that is the cause."

The End of Albinism

In recent years much has changed in the treatment of albinism. Medical science is able to provide more assistance than ever before. Self-help groups offer a forum for exchanging experiences and improving understanding of the condition. The ultimate solution, however, rests not with man but with God.

Albinism, like all other maladies, is a consequence of the imperfection that all humans have inherited from the first man, Adam. (Genesis 3:17-19; Romans 5:12) By means of the ransom sacrifice of Jesus Christ, Jehovah will soon provide perfect health for all those displaying faith. Yes, he is the One "who is healing all your maladies." (Psalm 103:3) Then, albinism will be a thing of the past, for everybody who suffers from it will experience the fulfillment of Job 33:25: "Let his flesh become fresher than in youth; let him return to the days of his youthful vigor."



"Their spiritual situation is much more serious than my physical condition."
—John

"More Harm Than Good"?

"Blood transfusions with banked human blood may do more harm than good for a majority of patients," says a report from Duke University Medical Center, in Durham, North Carolina, U.S.A. Studies have found that transfused patients have "higher incidences of heart attack, heart failure, stroke and even death" than those who were not transfused. Why? "Nitric oxide in red blood cells begins breaking down almost immediately after red blood cells leave the body." Nitric oxide is crucial to keeping blood vessels open and thus allowing red cells to ferry oxygen to the body's tissues. "Millions of patients are apparently receiving transfusions with blood that is impaired in its ability to deliver oxygen," says the report.

TV Addiction in Bhutan

For decades the tiny Himalayan kingdom of Bhutan resisted the lure of modern media. But after many inhabitants complained that they could not watch the 1998 World Cup soccer tournament, the government introduced television in 1999. Now people can view 40 channels and are already addicted to Hollywood movies and Indian soap oper-

■ "The amount of [Arctic] ice loss this year [2007] absolutely stunned us because it didn't just beat all previous records, it completely shattered them."

—MARK SERREZE, NATIONAL SNOW AND ICE DATA CENTER, U.S.A.

■ The New Economics Foundation think tank estimated that "if everyone in the world had the same consumption rates as in the United States it would take 5.3 planet earths to support them . . . The figure was 3.1 for France and Britain, 3.0 for Spain, 2.5 for Germany and 2.4 for Japan."—REUTERS NEWS SERVICE, BRITAIN.

eras, says a report from Bhutan. Instead of sitting together singing and talking as they used to, families gather to watch TV. One woman laments having little time for anything else anymore—including prayer. "Even though I spin my prayer wheel," she said, "my mind is always on the TV," reported the Qatar daily *The Peninsula*. "But what many fear is the rabid consumerism of much of the outside world. 'Television and advertisements create desires [that] may not be satisfied given the economic situation of the people.'"

The Distracted Worker

"Office life can sometimes seem like a constant stream of calls, alerts and interruptions," says *New Scientist* magazine. Researchers found that a sample group of information workers averaged only three minutes of activity before being diverted. Since interruptions can eat up two hours of each working day, some busy office workers use computer analysis to distinguish the urgent from the nonurgent. Suggestions that can be used by all include: "Be honest with people, . . . tell them you really don't have a minute if you don't," and have the courage "to turn off your email, phone and instant messenger until the job is done."



What Did the Dream Mean?

Read the Bible account recorded at Daniel 2:25-45, and answer the questions below.

1. The image is made of what four metals?

.....

2. What do the metals represent?

.....

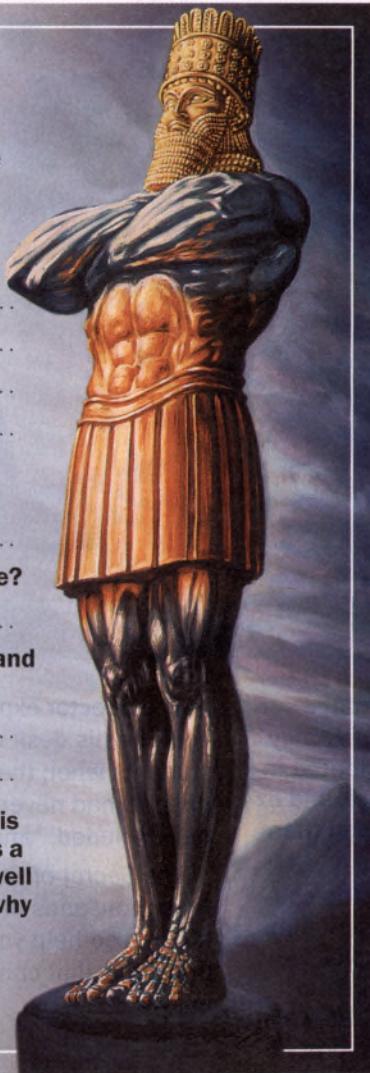
3. What happens to the image?

.....

4. What replaces the image, and how long does it last?

.....

FOR DISCUSSION: How does this account show that Daniel was a modest man? If you do a job well or are talented in some way, why should you be modest?



Who Is Part of Jesus' Family Tree?

Consider the clues. Look up the scriptures. Then write the correct names in the spaces provided.

5

CLUE: My grandson became the second king of Israel.

Read 1 Samuel 16:13, 14; 1 Chronicles 2:12-15.

■ Answers on page 22



From This Issue

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

PAGE 7 What should marriage mates be quick to do?

James 1:_____

PAGE 9 What should marriage mates keep an eye on?

Philippians 2:_____

PAGE 11 God directs his servants to avoid what?

Deuteronomy 18:_____

PAGE 21 If a youth becomes not just a hearer but a doer, what will he be?

James 1:_____



Children's Picture Search

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

6

CLUE: Isaiah prophesied that one of my descendants would 'stand up as a signal to the people.' Read Isaiah 11:10.

7

CLUE: I was known for making musical instruments. Read 2 Chronicles 7:6.

“It Is Simply Wonderful!”

■ That is how the director of a marriage survey described the book *The Secret of Family Happiness*. A couple who had participated in the survey gave him a copy of the book and explained that their study of it had helped them to prepare for marriage.

The survey director wrote to thank the couple for the “wonderful gift” they had sent him. He then expressed his hope that couples like them could teach others “what it takes to make marriages strong and healthy.” He was confident that publications like *The Secret of Family Happiness* would help the couple deal with differences that might arise. The director noted that this couple has the advantage of a strong faith and reliance on God’s help.

The director explained that he had put the book on his desk and that he shows it to his students when they ask for advice about marriage. “I had never seen this particular book,” he concluded, “and it is simply wonderful!”

The Secret of Family Happiness has benefited thousands of couples around the earth. It can also help you to put into practice Bible principles that can make your family life more enjoyable.

