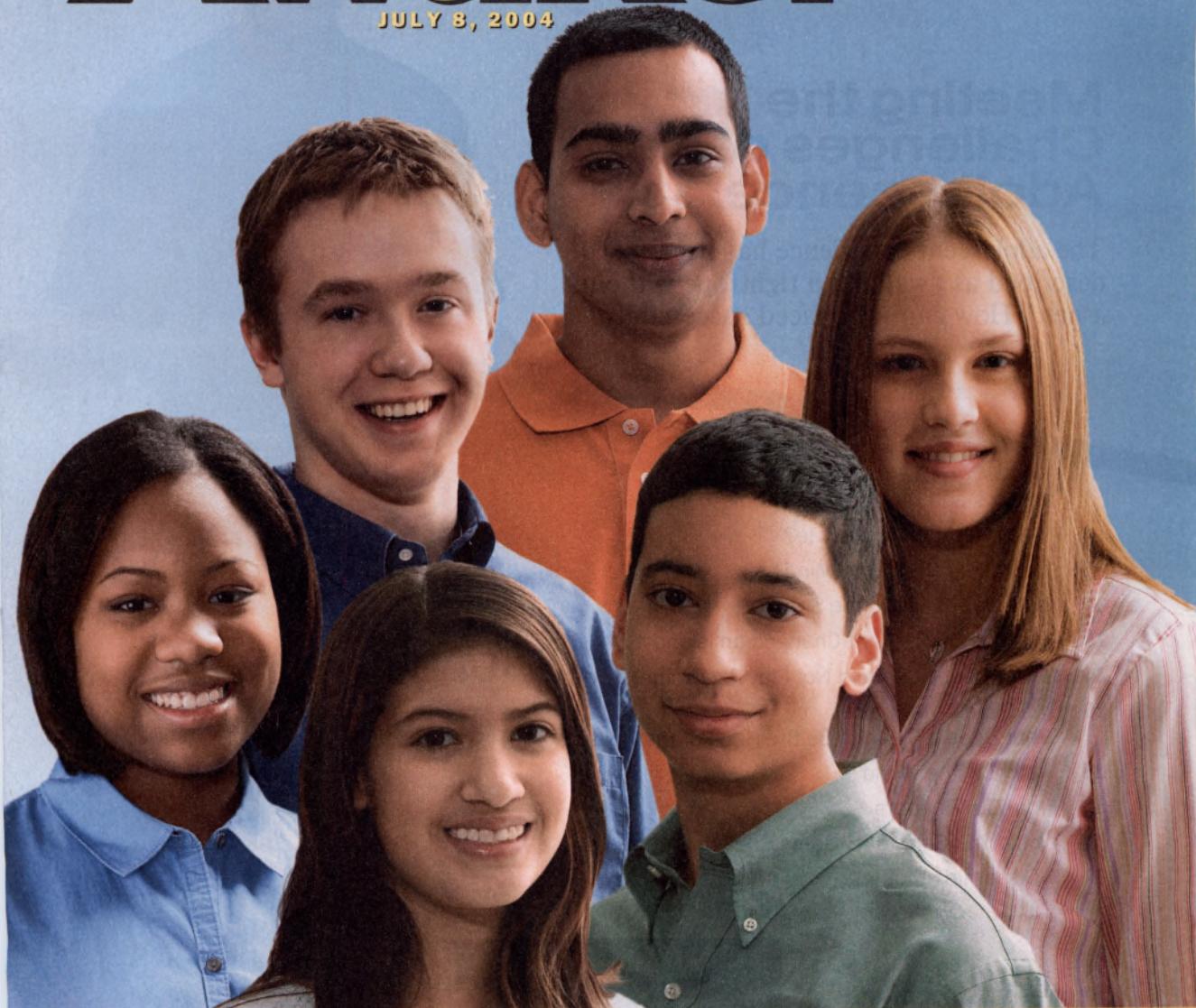


# Awake!

JULY 8, 2004



Meeting the  
Challenges of  
**Adolescence**

## **Meeting the Challenges of Adolescence 3-9**

The adolescent experience has been described as "walking a tightrope without a net." How can it be faced successfully?

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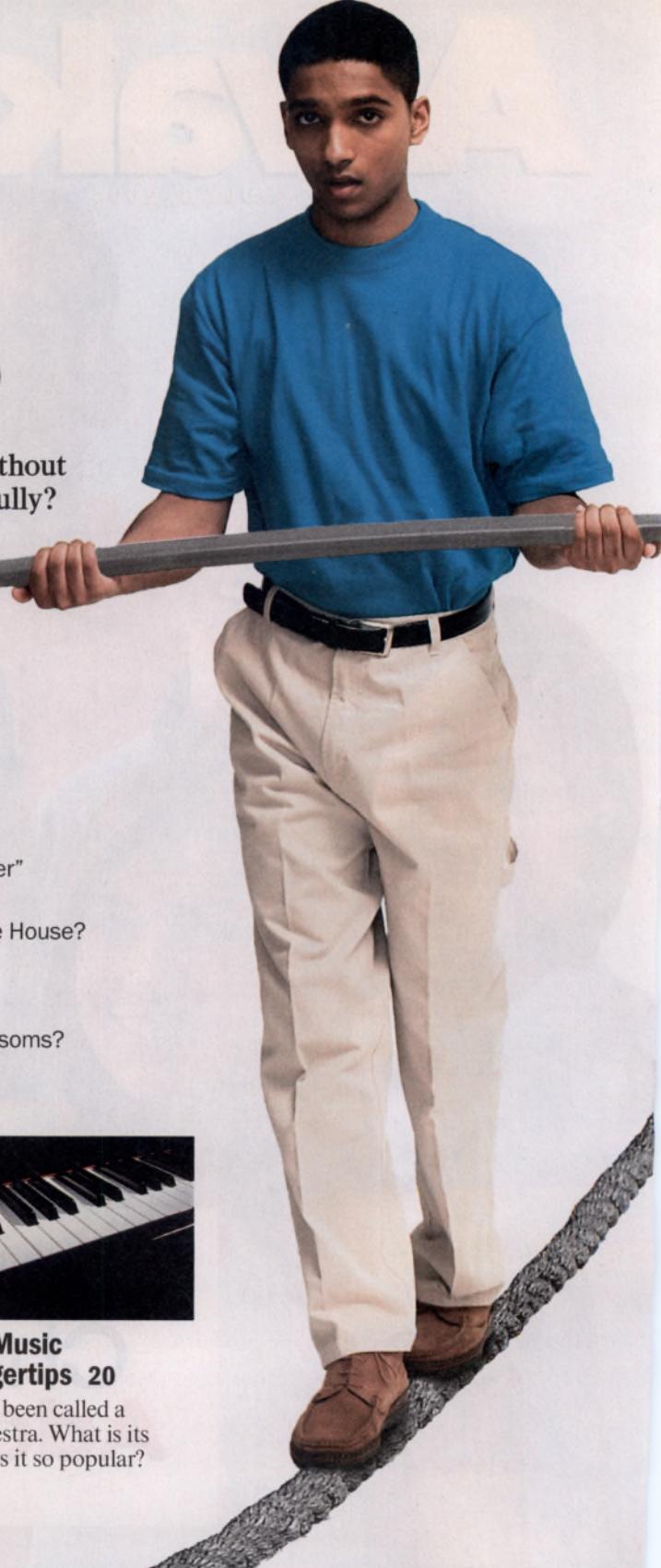
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What is Happening  
to Me?"

# The Joys and Challenges of Adolescence

**A**DOLESCENCE can be a wonderful time of life. Indeed, for many it is. And many adults look back fondly on their teen years.

At the same time, it must be acknowledged that we are living in "critical times hard to deal with." (2 Timothy 3:1) This has placed added pressure on youths, pressure different from that faced by previous generations. Perhaps this is why Sabrina Solin Weill, executive editor of a magazine for teens, describes the adolescent experience as "walking a tightrope without a net." Indeed, this tumultuous period of life can be fraught with feelings of awkwardness, anxiety, and confusion. "Caught between childhood and adulthood," Weill writes, "teens are left holding the worst attributes of each world."

If you are an adolescent, how can you cope with the challenges you face? If you are the parent of an adolescent, how can you be helped to recall what these turbulent years were like and thus better understand what your son or daughter is going through? In this series we invite both youths and adults to take a closer look at adolescence. Doing so will help youths not only to survive but to thrive.

# 'What Is Happening to Me?'

*"It seemed like I woke up one day and everything had changed. I was a different person in a different body."—Sam.*

**W**HAT is adolescence? Simply stated, it is the stage of life between childhood and adulthood. It is a time in which you undergo dramatic changes—physically, emotionally, and even socially. In one sense, entry into adolescence is exciting. After all, it means that you are on your way to becoming an adult. On the other hand, new feelings begin to emerge during this phase of life, and some of them can be confusing—even frightening.

However, you need not dread adolescence. True, it has its share of anguish. But it also provides a wonderful opportunity for you to make a fulfilling transition to adulthood. Let us see how—first by analyzing some of the challenges that adolescents face.

## The Onset of Puberty

During adolescence, changes take place in your body to prepare you for sexual reproduction. This process, called *puberty*, takes years to complete, and it affects more than just the development of your reproductive organs, as we will see.

Girls usually start puberty between ages 10 and 12, while many boys begin between 12 and 14. These are just averages, though. According to *The New Teenage Body Book*, "each person has his or her own special biological time clock that dictates when the various changes of puberty will occur." It adds: "There is a



## 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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very wide range of normal." So there is nothing wrong with you if you begin puberty before—or after—your peers.

Whenever it begins, puberty can affect how you look, how you feel, and how you view the world around you. Consider some of the fascinating yet challenging aspects of this unique stage of life.

### **'What's Happening to My Body?'**

Puberty begins with an increase in hormone levels, notably of estrogen in girls and testosterone in boys. Hormonal changes are partially responsible for the seemingly miraculous physical transformation that follows. In fact, after puberty begins, your body grows at its fastest rate since infancy.

At this time your reproductive organs start to mature, but that is only one facet of physical development. You may also experience a rapid increase in height, commonly called a growth spurt. While as a child you might have grown about two inches each year, it would not be unusual for you to grow at twice that rate during the growth spurt of puberty.

Throughout this time, to some extent you might feel physically awkward. This is normal. Remember, different parts of your body may be growing at different rates. A degree of clumsiness can result. But be patient—you are *not* doomed to a lifetime of being accident-prone. The physical awkwardness of adolescence will pass.

During puberty girls begin having a menstrual period, which is a monthly discharge

of blood, secretions, and tissue debris from the uterus.\* The menstrual period is usually accompanied by cramps as well as a drop in hormone levels. Since this has both physical and emotional effects, the onset of menstruation can be quite startling. "All of a sudden, I had this whole new experience to deal with," recalls Teresa, who is now 17 years old. "It messed up my emotions, and it hurt. And it came every month!"

There is no need to be frightened when you begin having your menstrual periods. After all, it is an indication that your body is functioning normally. In time, you will learn how to cope with the unpleasant aspects of your period. Some, for example, find that regular exercise decreases painful cramps. But everyone is different. You may discover that you drastically need to reduce physical activity during your period. Learn to "listen" to your body and give it what it needs.

During adolescence, both girls and boys become increasingly conscious of their appearance. "That's the point in time I really started noticing—and caring—about how other people thought I looked," confides Teresa. "And I find that I am still frustrated with my appearance most of the time," she continues. "My hair won't cooperate, my clothes don't fit right, and I can't even seem to find clothes that I like!"

\* At first, menstrual periods may occur more often or less often than once a month. The amount of flow can vary widely too. None of these situations should cause you alarm. However, irregular periods for a year or two might indicate the need to consult a doctor.

**Semimonthly Languages:** Afrikaans, Albanian, Arabic, Cebuano, Croatian, Czech,<sup>#</sup> Danish,<sup>#</sup> Dutch, English,<sup>##</sup> Estonian, Finnish,<sup>#</sup> French,<sup>#</sup> German,<sup>#</sup> Greek, Hungarian, Iloko, Indonesian, Italian,<sup>#</sup> Japanese,<sup>#</sup> Korean,<sup>#</sup> Latvian, Lithuanian, Norwegian, Polish, Portuguese,<sup>#</sup> Romanian, Russian, Serbian, Slovak, Slovenian, Spanish,<sup>#</sup> Swahili, Swedish,<sup>#</sup> Tagalog, Ukrainian

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## Parents Aren't Perfect

"As a kid, I thought my parents were perfect. Somehow, when I became a teenager, they seemed to get, well, less smart. What I mean is that I realized my parents aren't perfect, and this was disconcerting. Unfortunately, this realization caused me to question their thinking and judgment. Through hard-learned lessons, though, I have regained my full respect for them. No, they're not perfect, but they're often right. And even if they aren't right, they're still my parents. We are gradually becoming more like friends, which is I guess what usually happens with kids and their parents."—Teresa, 17.

Your body may betray you in other ways as well. For example, your sweat glands become more active during puberty, which might make you perspire more. Bathing or showering regularly, as well as making sure that your clothing is freshly laundered, can help you to control body odor. So can using a deodorant or an antiperspirant.

Also during puberty the oil glands in your skin become more active, which can result in pimples and acne. "I always seem to have a pimple attack just when I want to look my best," laments a girl named Ann. "Is it my imagination or do pimples have a sort of sixth sense about when they're most unwanted?" Acne has presented a problem for Teresa as well. "It makes me feel ugly and self-conscious," she says, "because when people look at me, I think that's what they are looking at!"

Of course, boys can be affected by skin problems too. In fact, some experts say that boys are even more susceptible than girls. Whether you are a young man or a young woman, you can benefit by washing the oily areas of your body regularly, including your face, neck, shoulders, back, and chest. In addition, frequently shampooing your hair can help prevent oils from spreading to your skin.

Also, there are products available that are designed to fight acne and pimples. "My parents helped me to find cleansers and topical ointments," Teresa says. "They also helped me not to eat a lot of junk food. When I *don't* eat junk food and I *do* drink a lot of water, my acne pretty much goes away."

Another physical change, which affects boys in particular, has to do with the voice. Your vocal cords will likely thicken and lengthen during puberty, resulting in a gradual deepening of your voice. For Bill, this occurred without his even noticing it. "I didn't realize that my voice had changed," he says, "except that people stopped thinking I was my mom or my sister when I answered the phone."

Sometimes a voice that is in the process of changing tends to crack—to shift suddenly from a low pitch to a high one. "It was the most embarrassing thing," says Tyrone, looking back on his youth. "Anytime I got nervous and excited, that's when it would happen. I tried not to get too emotional, but of course I did." Tyrone adds, "After a year or maybe it was two years, it stopped happening." If this is happening to you, do not despair! Your voice too will soon settle into its new, deeper range.

### 'Why Do I Feel This Way?'

It is not unusual for adolescents to experience a wide range of painful emotions. For example, you may find that you and your best childhood friends have started to drift apart. Not that there was a major falling out. Perhaps you just have little in common with each other. Even your parents—to whom you once ran for comfort and security—might suddenly seem old-fashioned and unapproachable.

All of this can leave a teen feeling socially isolated. "Some researchers have argued that loneliness is experienced more frequently and more intensely in adolescence than in either childhood or adulthood," says one reference

work. Fearing that others will view you as strange, you might tend to keep your thoughts and feelings to yourself. Or perhaps you are reluctant to reach out to others, feeling deep down that no one would really want you as a friend.

Most adolescents go through periods of loneliness, and so do many adults. The important thing to keep in mind is that, in time, these feelings can pass.\* Remember, because you are an adolescent, virtually everything about you is changing. Your view of life, of others, and even of yourself is in a constant state of flux. Indeed, the person you see in the mirror might, at times, seem like a total stranger to you! You may feel as did Steve, 17, who admits, "It's very difficult to say you

\* If loneliness is chronic or if you are harboring thoughts of suicide, you should seek help. Without delay, speak to your parents or to a mature adult in whom you can confide.

know yourself when your self is changing so rapidly."

One of the best ways to counteract loneliness is to reach out to others. This might mean getting to know others who are not part of your peer group. Are there any older ones you know who could use a friendly visit? Could you do chores for them, especially if they are in need of assistance? The Bible encourages all—youths and adults—to "widen out" in their affection for others. (2 Corinthians 6:11-13) Doing so can open up wonderful opportunities.

The Bible passage quoted above is just one of many principles that have helped Christian youths to cope with the challenges of adolescence. As you read the next article, consider how God's Word can have a powerful influence on your life as you grow toward adulthood.

***Many youths have forged close bonds  
of friendship with older ones***



# "Keep Your Creator in Mind"

*"Keep your Creator in mind while you are young! In years to come, you will be burdened down with troubles and say, 'I don't enjoy life anymore.'"*

*—Ecclesiastes 12:1, "Contemporary English Version."*

**T**HE above passage from the Bible provides much food for thought. You only have one chance at youth. Later on, you will look back on the years of your adolescence, either with joyful satisfaction or with painful regret. Which will it be for you? How can you guide the outcome?

"Keep your Creator in mind," urges the Bible, as quoted above. How can you do so? By adhering to God's laws and principles, which are set out in his Word, the Bible. No, this does not mean that you have to lead an austere life of religious fanaticism, denying yourself all pleasure. On the contrary, keeping your Creator in mind will result in your having the greatest happiness possible. How can that be?

To illustrate, imagine that you have been given a car and a driver's license. Exciting new freedom is before you, which can bring you great pleasure. Just think of the places

you can go! However, your newfound freedom carries with it a sobering responsibility. While driving, you must obey the rules of the road and pay attention to traffic signals, speed limits, and warning signs. Does this responsibility rob you of your joy in driving? Not at all! In fact, it serves as a protection. There certainly is no joy in having an accident, is there?

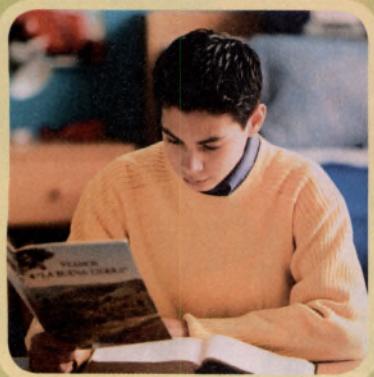
It is similar with the freedom that your Creator, Jehovah God, has given you. As you grow to adulthood, he lets you choose how you will use your life. (Deuteronomy 30:19; Proverbs 27:11) What an awesome privilege that is! But that freedom carries with it serious responsibility. In his Word, Jehovah has set forth 'rules of the road'—standards that he wants you to live by. Do these standards hinder your happiness? Hardly! Instead, they protect you from the heartache and pain that afflict so many youths today.

## To Help You Succeed as an Adolescent

**Take time to read  
God's Word**

**Apply yourself  
in the ministry**

**Avoid bad  
associations**



Federico, now in his early 30's, knows the truth of that. As a young man, he saw schoolmates getting involved in all manner of activities that he knew he should avoid. "It looked like they were having a good time," he says, "but I never thought that they were genuinely happy." Looking back, Federico is glad that he had Bible standards to guide him through adolescence. "Sure, I had problems to contend with, like any young person," he says. "But the Bible really protected me. And there was always a fellow Christian on hand to help me. Following Bible principles has given me greater happiness than I could ever have imagined!"

Jehovah God wants you to be happy—really happy. That involves far more than the mere facade of fun that is simply a mask for underlying misery. The Bible states: "Enjoy your youth. Be happy while you are still

young." But the same Bible verse adds a warning. "Remember," it says, "that God is going to judge you for whatever you do."—Ecclesiastes 11:9, *Today's English Version*.

Keep your Creator in mind by making wise use of the freedom he has granted you. If you do, you can be assured that your Creator will keep *you* in mind and that he will give you the greatest happiness possible. The Bible states: "The blessing of Jehovah—that is what makes rich, and he adds no pain with it."—Proverbs 10:22.

To help young people cope with the trials of adolescence, Jehovah's Witnesses have published a 320-page publication entitled *Questions Young People Ask . . . Answers That Work*. To date, nearly 34 million copies of this book have been printed in 77 languages. You can obtain a copy by contacting Jehovah's Witnesses in your neighborhood.

**Maintain close communication with your parents**





By Awake! writer in Australia

# Lavender

## A Gift to the Senses

QUEEN ELIZABETH I of England ordered that the royal table be supplied with a condiment made of it. Charles VI of France sat on cushions stuffed with it. Queen Victoria of England washed with it. What was the object of this royal ardor? A fragrant shrub known as lavender. Anyone who has ever stood amid the purple haze of a lavender field will understand why so many people are captivated by this aromatic plant.

There are over 30 species of lavender. This hardy herb thrives in diverse climates, from the cool air of the French Alps to the dry heat of the Middle East. The plant's botanical name *Lavandula* comes from the Latin *lavare*, meaning "to wash." It is derived from a custom of the ancient Romans, who perfumed their baths with lavender oil.

### A Time-Honored Tonic

The medicinal use of lavender dates back nearly 2,000 years. During the Middle Ages, it was a main ingredient in a con-

coction known as four thieves vinegar, which was used to combat the plague. The vinegar likely derived its name from the fact that grave robbers who rummaged through the belongings of plague victims washed in this lavender-based solution. Despite the risks of their work, it seems they rarely contracted the disease.

Herbalists of the 16th century claimed that lavender would cure not only colds and headaches but also paralysis of the limbs and neuroses. In addition, they believed that wearing a skullcap made of lavender would increase intelligence. As recently as World War I, some governments asked their citizens to gather lavender from their gardens so that the extracted oil could be used to dress soldiers' wounds.

### Traditional Treatments Investigated

Some lavender oils, especially *Lavandula angustifolia*, appear to have an effect on a number of species

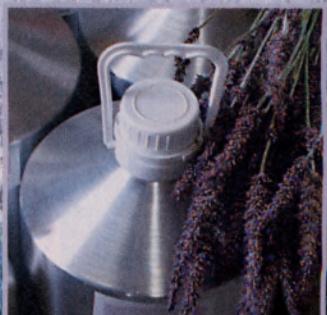
**On many farms, traditional methods are still used to harvest lavender**



**Lavender oil is extracted in large stills**



**Lavender oil is matured in ceramic-lined steel pots before being used in various products**



of bacteria and fungi. Some researchers have suggested that lavender oil may be useful for treating bacterial infections that are resistant to antibiotics. "Lavender oil has also found several uses in midwifery," says one recent research paper. "In a large clinical trial it was shown that the mothers using lavender oil [in their bathwater] consistently reported lower discomfort scores 3 to 5 days postnatally . . . Lavender oil is also currently used in many delivery rooms for its general calming action."

What about Queen Elizabeth's taste for lavender? Is lavender really edible? "Lavender was a favourite flavouring in the cooking of Tudor and Elizabethan England, used as a relish to be served with game, roasted meats, with fruit salads, sprinkled over sweet dishes, or as a sweetmeat in its own right," says Judith McLeod in her book *Lavender, Sweet Lavender*. Today some species of lavender are used to flavor biscuits, cakes, and ice cream. On the other hand, not all types are desirable—especially to insects. In fact, "lavender oil or powdered foliage and flowers may also be useful as both commercial . . . and domestic pesticides as the application of lavender deters mites, grain weevils, aphids and clothes moth," reports one study.

#### Growing Demand

In recent decades lavender has enjoyed renewed popularity. It is now cultivated in Australia, Europe, Japan, New Zealand, and North America. "Lavender is like wine," says Byron, a young horticulturist who tends 25 acres of lavender plants in southeast Victoria, Australia. "Oil produced from the same species will vary from region to region, as it

#### Three types of lavender oil are produced commercially

##### True lavender oil

is extracted from a species known as "*Lavandula angustifolia*." As opposed to the oils mentioned below, it has little or no camphor smell. About 200 tons of it is produced annually.

##### Spike lavender oil

comes from the plant "*Lavandula latifolia*." Up to 200 tons of it may be produced in a year.

##### Lavandin oil

comes from a hybrid of the two species mentioned above. More than a thousand tons of it are sold worldwide each year.

is influenced by the soil and climate in which the lavender grows. Even the timing and method of harvesting can affect the final product."

Unlike wine, lavender oil is extracted not by crushing but by steaming. Byron explains: "It takes about 250 kilograms [550 pounds] of lavender to produce one liter [quart] of oil. The freshly cut flowers, stalks, and leaves are firmly pressed into a large steel drum. Steam is pumped into the base of the container, and as it rises through the plant parts, it releases the oil. The steam and oil pass through a condenser and into a pot, where the oil separates from the water

and rises to the surface. The oil is drawn off and stored in ceramic-lined containers, where it is left to mature for some months."

Lavender oil from Byron's farm is used in soaps, creams, and candles. The flowers are sold freshly cut or dried, and the flower heads are a prized ingredient in potpourri. Thousands of tourists come each year to taste lavender treats and to absorb the sight and scent of the lavender fields. Byron often reminds these appreciative visitors: "We don't make the oil; we just extract it. The Maker of lavender is the One who provided the plant as a gift to our senses."

#### In Our Next Issue

■ Protect Yourself From Fraud

■ What's Wrong With Premarital Sex?

■ When Concern About Appearance Becomes an Obsession

# Beer

## The Story of the Golden Beverage

**W**HAT is often the dream of a really thirsty man? In many lands, whether a laborer or a businessman, he may think of a glass of his favorite golden beverage. He may imagine the rich, white head of foam and the delicious bitter taste. He may then say to himself, 'What I would give for a glass of cold beer!'

Beer is almost as old as mankind itself. For millenniums it has kept its popularity, and in many areas it has become an integral part of local culture. Sadly, especially in some European countries, beer has become a source of problems for those who overindulge in it. However, consumed in moderation, its unique qualities and flavor make drinking it quite enjoyable. Let us examine the history of this popular beverage.

### How Far Back Does It Go?

As indicated by cuneiform tablets found in the territory of the ancient Sumerians in Mesopotamia, beer was available there as early as the third millennium B.C.E. During the same period, this beverage was also to be found on the tables of Babylonians and Egyptians. In Babylon, where 19 different types of beer were known, brewing was even regulated by laws included in the Code of Hammurabi. These standards defined, for example, the price of beer, and any breach of them

was punishable by death. In ancient Egypt, brewing was widespread, and beer was a favorite beverage. Archaeological excavations there revealed the oldest written recipe for the brewing of beer.

The technology of brewing eventually found its way to Europe. Some Roman historians in the beginning of the Common Era mentioned that Celts, Germans, and other tribes enjoyed beer. The Vikings believed that even in Valhalla—according to Nordic mythology, the hall where brave warriors went after death—the men's cups would overflow with beer.

During the Middle Ages in Europe, the brewing of beer moved to the monasteries. European monks improved the technology of the process, using hops as a preservative. Industrialization in the 19th century brought in the mechanization of brewing and proved to be a milestone in the history of this popular drink. Then, some very important scientific discoveries took place.

**Egyptian model depicting the preparation of bread and beer**

Su concessione del Ministero per i Beni e le Attività Culturali - Museo Egizio - Torino



The French chemist and microbiologist Louis Pasteur found that the yeast that caused the fermentation of beer consisted of living organisms. That discovery made more precise control of the conversion of sugar to alcohol possible. The Danish botanist Emil Christian Hansen became one of the greatest personages in the history of brewing. All his life he researched and classified different species of yeasts. Among other things, his research was concerned with cultivating a pure strain of brewer's yeast. In this way, Hansen literally revolutionized the brewing industry.

But is brewing such a great challenge? It may sound unbelievable, but it really is. Let us briefly consider the secret behind a great-tasting glass of beer.

#### Before It Reaches Your Glass

Brewing technology changed considerably over the centuries and even today varies from brewery to brewery. But, in general, almost all beers contain four main ingredients: barley, hops, water, and yeast. The entire process of brewing can be divided into four steps: malting, preparation of the wort, fermentation, and maturation.

**Malting.** During this stage, barley is sorted, weighed, and purified of foreign matter. Afterward, it is steeped in water—a necessity if the barley is to germinate. The germination takes between five and seven days at a temperature of about 58 degrees Fahrenheit. The end product of this process is green malt, which is transported to special ovens for kilning, a drying procedure. The moisture in the green malt is reduced to

## The Leading Actors

In times past, a large number of professions had a hand in the production of beer. Here are some of them.

■ **Maltster**—the first actor in the drama of brewing. He was assigned to produce the malt from barley or wheat. He oversaw the germination of grain and the kilning of green malt. On his shoulders rested a weighty responsibility, since the taste of the beer produced depends considerably on the quality of the malt.

■ **Brewer** (shown above)—the man in charge of boiling. First, he mixed the milled malt with water, and then, during the boiling, he added hops. The final product of his work was the wort.

■ **Cellar master**—an experienced specialist who oversaw the fermentation of the beer in the tubs and its maturation in the lagering cellar. Afterward, he transferred the finished beer into smaller vessels.

between 2 and 5 percent to stop the germination. After kilning, the sprouts are removed from the malt, and the malt is milled. It is then ready for the next step.

**Preparation of the wort.** The milled malt is mixed with water to produce mash, which is then gradually heated. At certain temperatures the enzymes start to convert starches into simple sugars. This step lasts more than four hours and produces the wort, which is then filtered to remove impurities. Next comes the boiling process, which arrests the activity of enzymes. During the boiling, hops are added to the wort to provide the typical bitterness of beer. After some two hours of boiling, the wort is cooled to the required temperature.

**Fermentation.** This is probably the most important stage of the brewing process. Simple sugars contained in the wort are, by means of the yeast, converted to



▲ Saskavým svolením Pivovarského muzea v Plzni

# Pilsner

## The Most Imitated Original

It all started in 1295. The king of Bohemia, Wenceslas II, founded the town of Plzeň, and shortly after that, he granted 260 of Plzeň's burghers the right to brew beer. Initially the burghers brewed the beer in their houses and only in small amounts, but later they formed guilds and founded breweries. In time, however, the economy and culture in Bohemia declined, and this affected the brewing. Ignoring the approved technology and using their own recipes, the brewers often produced a distasteful brew that was not worthy to be called beer.

At that time, two types of beer were produced in Europe. Top-fermented beer was brewed, especially in Bohemia, while a bottom-fermented beer, of far better quality, was popular mainly in Bavaria. There was a huge gulf between the Bavarian lagers and the Plzeň beers.

An important turning point came in 1839. About 200 of Plzeň's burghers decided to do something about the situation. They founded the Burgess Brewery, where only bottom-fermented, or Bavarian-style beer, was to be brewed. The famous brewer Josef Groll was called in from Bavaria. He immediately set to work to produce a typical Bavarian beer. The result was very different—but also far better than he had anticipated. Groll's experience coupled with fine local raw materials helped to produce a beer that took the world by storm. Why? Because of its unique taste, color, and aroma. However, the eminence of Plzeň's beer also had its drawbacks. Many brewers, desiring to gain from this development, started to call their products pilsner.

Pilsner thus became not only famous but also the most imitated of the golden beverages.

### Water tower of a Plzeň brewery

S laskavým svolením  
Pivovarského muzea v Plzni



**Josef Groll**

alcohol and carbon dioxide. The duration, one week at the most, and the temperature of the process depend on the type of beer—ale or lager—being produced. The so-called green beer is then transferred into tanks in a lagering cellar to mature.

**Maturation.** During this stage, beer acquires its typical taste and aroma; released carbon dioxide also gives the beer its sparkle. Beer matures during a period that can range from three weeks to a few months, depending on the type of beer. Finally, the finished beer is packaged into casks or bottles and is ready to be sent out to its final destination—perhaps eventually reaching your table! But which type of beer would you like to try?

### The Beverage of Many Faces

The fact is, beers may differ considerably from one another. You can enjoy beer that is light or dark, sweet or bitter, as well as beer made from barley or from wheat. The taste of beer depends on many factors, including the quality of the water used, the type of malt, the technology employed, and the yeasts used in the process.

One of the most eminent beers is pilsner (or pils), a classic pale-colored lager. This type of beer is produced by hundreds of breweries all around the world. However, authentic pilsner is brewed only in the town of Plzeň, or Pilsen, located in the Czech Republic. The secret to its production lies not only in technology but also in the raw materials used—soft water, high-quality malt, and the right type of brewer's yeast.—See the accompanying box.

Another excellent type of beer is weiss beer, a wheat beer that is especially popular in Germany. The

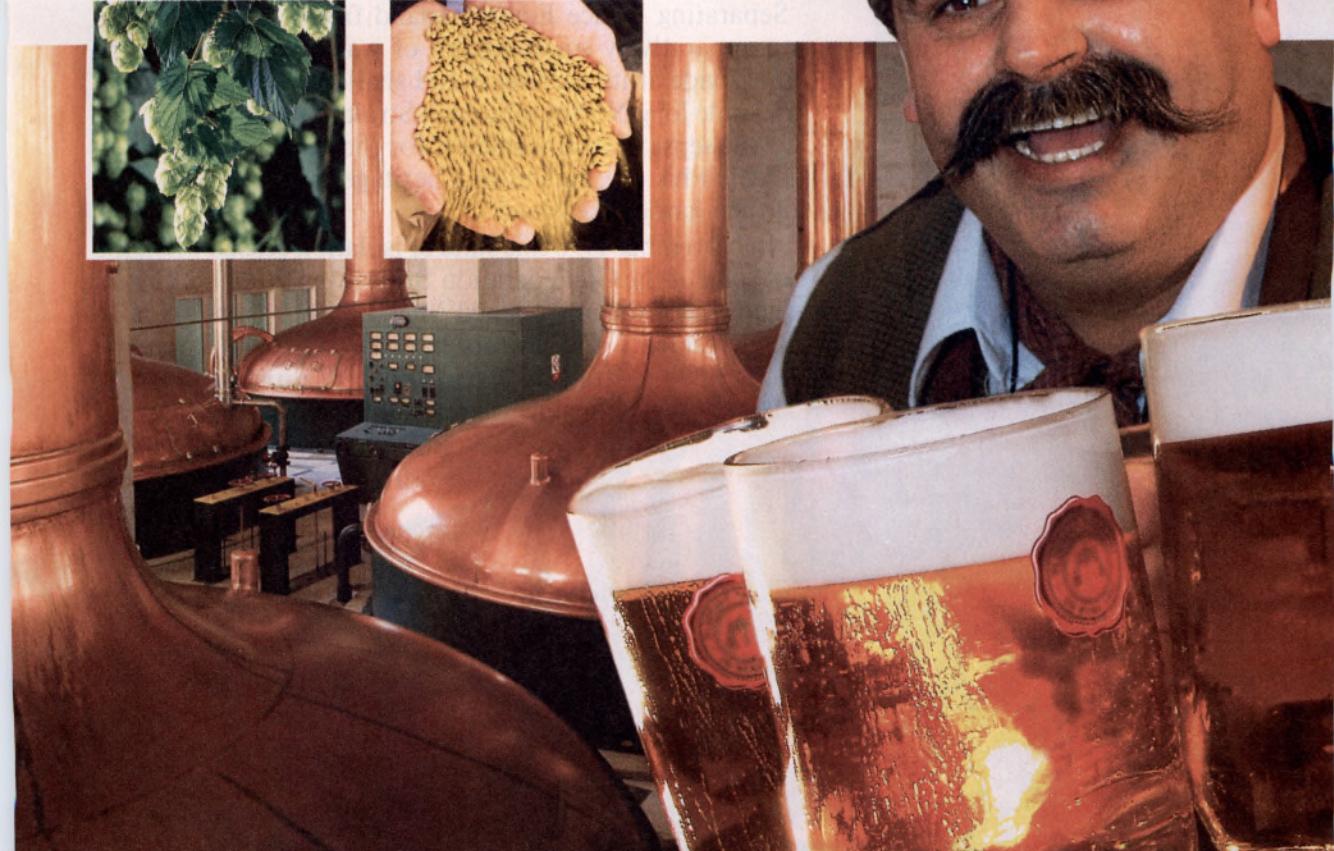
British specialties are porter and stout. Porter is a strong, top-fermented beer made from roasted malt, which gives this beverage a dark, rich color. Porter was first brewed in London in the 18th century. Originally, it was intended to be used as a "nourishing" beverage for hard workers, such as porters. Stout, a very dark and heavy beer—made famous in Ireland and the world by the Guinness family—is a variation of the traditional porter. You can experience either the English sweet stout, which usually contains lactose (milk sugar), or the Irish dry stout, which is bitter and has a higher alcohol content.

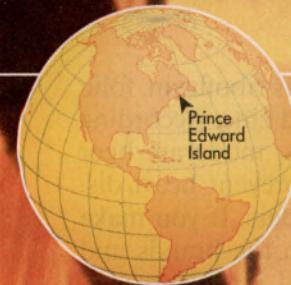
Another important factor for many who enjoy beer is how it is consumed, whether it comes from a bottle or a can or is drawn from a barrel. Americans tend to like their beer ice-cold. Others prefer it at room temperature or somewhat chilled and served directly from the barrels stored in the pub cellar.

Truly, beer is a beverage of many faces. By drinking it in moderation, you might gain some health benefits. In fact, it contains various important vitamins

and minerals, such as riboflavin, folic acid, chromium, and zinc. According to some authorities, moderate beer drinking can help prevent heart disease and skin disorders. If you make a good choice from the brands and types available, and if you are balanced in your use of it, you may enjoy this delicious and refreshing drink. So the next time you sit before a glass of the golden beverage crowned with a head of white foam, recall its fascinating history!

#### **Hops, malt, and a brewing house**





By Awake! writer in Canada

# A UNIQUE BRIDGE THAT CHANGED AN ISLAND

**N**ESTLED in the Gulf of St. Lawrence on Canada's Atlantic Coast is verdant, crescent-shaped Prince Edward Island, Canada's smallest province. Jacques Cartier, a 16th-century French explorer, described it as "the fairest land that may possibly be seen." Affectionately called the Island by its more than 130,000 inhabitants, Prince Edward Island is noted for pristine beaches, potatoes grown in rich, red soil, and lobsters harvested off its shores. More than a century after the island joined the Dominion of Canada in 1873, it established a fixed link to the mainland—the unique Confederation Bridge. What impact has this bridge had on the island and its people?

Separating Prince Edward Island from the mainland is a comparatively small stretch of water, only about nine miles wide at its narrowest and shallowest point. Yet, the 180-mile-long Northumberland Strait has contributed to a strong sense of distinctiveness for the islanders, who cherish their history, agricultural heritage, and the tranquillity of their gardenlike island.

In November 1996 this state of isolation ceased when the last span of the Confederation Bridge was fitted into place. The bridge officially opened May 31, 1997. Since then, island residents and visitors have been able to cross the strait by car in about 12 minutes, thus enjoying continuous year-round access.

But what attracts people to this isolated island? The



**Prince Edward Island  
attracts hundreds of thousands  
of tourists each year**

answer for many is one book title—*Anne of Green Gables!* Yes, the author of that famous book, Lucy Maud Montgomery (1874-1942), was from Cavendish, where her home still stands. Each summer, more than 200,000 tourists flock there.

#### **Why a Unique Bridge?**

Around the world there are numerous great bridges that are architectural wonders of our modern age. So, what makes this one worthy of special mention? It is by no means the longest bridge in the world, but it does lay claim to being in winter “the longest bridge over ice-covered waters.”

Invariably, the Northumberland Strait fills with ice during the five winter months, so this bridge is designed to stand up to such harsh conditions. Its mainland approach is at Jourimain Island, New Brunswick. From there it spans the strait and terminates at the sandstone-rimmed southwest shore of Prince Edward Island, near the tiny hamlet of Borden. Are you eager to experience the drive across this 36-foot-wide, two-lane ribbon of highway? Walking and cycling are not allowed

on the bridge, so a provision was made to shuttle pedestrians and cyclists across. At its navigational span, you will be some 195 feet above the water, about as high as a 20-story building. Why so high? This allows oceangoing ships to pass through at the center of the channel.

#### **Building With the Environment in Mind**

A project of this magnitude involves complicated comprehensive insurance coverage as well as much environmental planning to protect the surrounding ecosystem. Of major concern was the effect the bridge would have on the flow of ice through the strait in springtime. Any ice buildup could have an impact on local land and marine habitats as well as on the fishing industry. Even dredged material from the ocean bottom was relocated to select sites with hopes of creating new lobster habitats.

The copper cone-shaped ice shields placed at water level on each of the pier shafts are significant. (See diagram, page 18.) What purpose do they serve? As drifting ice pushes against the cone, the ice slides upward until it breaks under its own weight. It then falls back into the current and slides by either side of the pier. To minimize a buildup of the ice drifting through the strait, the piers are anchored on bedrock some 800 feet apart.



**The HLV Svanen** placing a main girder on a pier shaft

Photo courtesy of Public Works & Government Services Canada and Bally Photo of Summerside



### The Challenge of Assembling the Bridge

The sheer size of the pieces of the bridge is awesome. The four main building blocks are (1) a pier base, which sits on the bottom of the strait on a prepared foundation and extends up to the water's surface, (2) a pier shaft, which is attached to the pier base, (3) a main girder, which rests on top of the pier shaft, and (4) drop-in spans to connect the main girders. (See diagram above.) The construction involved more than 6,000 workers, and over 80 percent of the work was done on shore at "a massive 150-acre staging facility." Individual pieces were then transported from the land base to the marine location and assembled at sea.

A finished girder measures up to 630 feet from end to end. "How can anything that big be moved?" you may ask. By using a transporter. Looking at one in action reminds you of an ant carrying an object many times its size on its back. Carrying 7,500 tons per girder, that is quite a weight! Pushing its way ever so slowly along a steel track at a speed of three meters per minute, the transporter

did not win any races. No wonder the two transporters used were nicknamed the Turtle and the Lobster!

Since these "ants" were not amphibious, a 335-foot-tall twin-hulled floating crane was utilized. One reporter described it as "quite an ugly thing, with a too-long neck and monstrously huge feet" but having "the grace of a swan." Originally built in 1990 for work on the bridge between the Danish islands of Funen and Zealand, this vessel was refitted and brought over from Dunkerque, France. Amazingly, this heavy lift vessel "can pick up the equivalent of 30 Boeing 737 airplanes and can manoeuvre on open seas with a surgeon's precision." Guided by a satellite-based global positioning system, it positioned the main



*The center of the bridge is about 195 feet above the water, to allow ships to pass through*



girders and all other pieces to an accuracy of within less than an inch.—See picture, page 18.

### What Has Been the Impact on the Island?

The new bridge stands as a symbol of progress. For some, however, it leaves unanswered questions about the future. Even now, seven years after its inauguration, it is too early to predict what the overall impact of the bridge will be, especially on the environment. In 2002 a lobster scientist reported that the bridge did not seem to have affected the lobster population. He also said: "The last five years have been the best for rock crab." How has tourism been affected?

During a recent period, tourism increased by "a whopping 61 per cent," says one report. Of course, most tourists come during the summer season. In addition, between 1996 and 2001, exports almost doubled. Employment also improved. On the negative side, many of

those who were employed by the former ferry service are earning far less. Another complaint made by some is the high toll price. But then, as some might say, progress has its price.

Has easier access to the mainland changed the charm of the island? Some who come "from away" to enjoy the tranquillity of the island may wonder if they can still find an escape from the hectic pace of the mainland in the unspoiled landscape and sand dunes of *Abegweit*, the "cradle in the waves," as the native Micmac people called it.

Truly, the Confederation Bridge is a most impressive achievement. Do drivers tend to fall asleep at the wheel during their short drive? Hardly. The elongated S design helps them stay alert to enjoy the experience. Perhaps this bridge will give you added incentive to come visit this "Garden of the Gulf" and taste its still peaceful way of life, whether you appreciate *Anne of Green Gables* or not.

## Challenges of Winter Travel

Early European settlers on Prince Edward Island soon discovered that the fields of moving ice cut them off from the mainland for five months every year. Crossing the ever-changing ice floes, often piled up by gale-force winds, was a formidable task. Certainly, it was not an experience for the fainthearted. The first attempt these settlers made at a winter crossing of the strait was in 1775 in small canoes fitted with wooden runners, in imitation of the Micmac natives. From then on, mail and passengers crossed the strait throughout



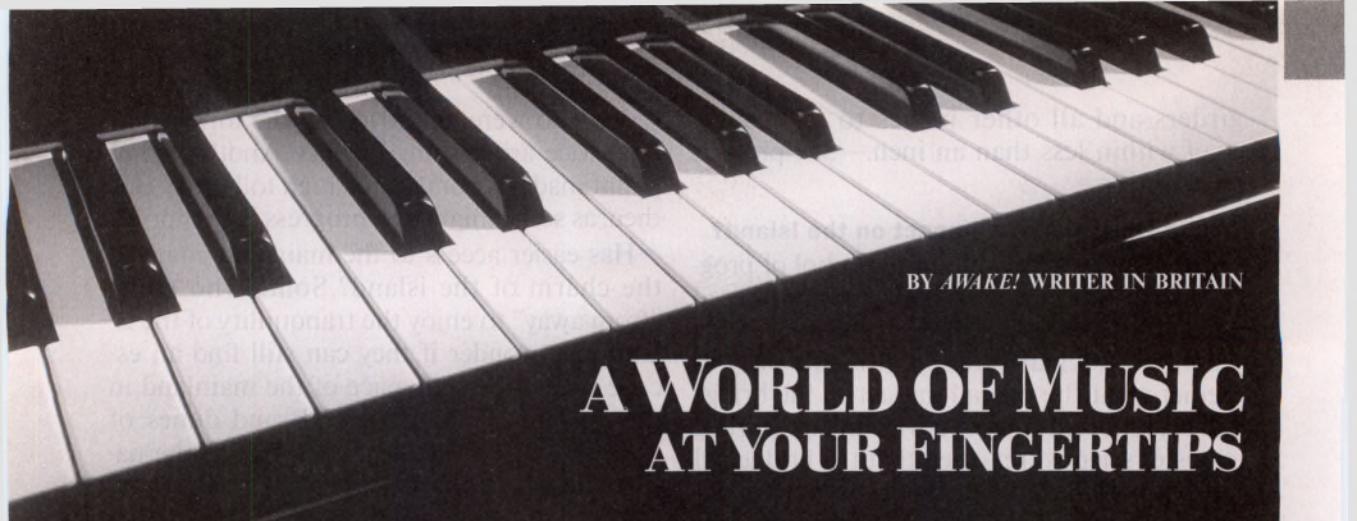
**Iceboats crossed the Northumberland Strait until 1917**

Public Archives and Records Office of Prince Edward Island, Accession No. 2301-273

the winter with some regularity, although "there was rarely a line-up of passengers eager to take their chances on the iceboats," says the book *Lifeline—The Story of the Atlantic Ferries and Coastal Boats*. F. H. MacArthur states in the *Maritime Advocate and Busy East*: "Ladies were taken across for double fare as they were not supposed to do any physical labor. Male passengers were fastened to the boat by leather straps, which served the double purpose

of hauling traces and to prevent [the men] from drowning should they accidentally fall into the water. The boats were about 17 feet long, 4 feet wide, [with] the bow turned up like the runner of a sled. The exterior of the boat was sheathed with heavy tin." The last crossing of these iceboats is thought to have been on April 28, 1917, after which the government obtained an ice-breaker that could navigate the ice as regularly as and more safely than the iceboats.





BY AWAKE! WRITER IN BRITAIN

## A WORLD OF MUSIC AT YOUR FINGERTIPS

**T**HREE greatest of all musical instruments”—that is how some view the piano. Versatile and expressive, it is equally at home in the worlds of classical, jazz, and popular music. It dominates the concert stage as a majestic soloist yet provides discreet support to even a shy singer. It functions as a “one-man orchestra” but readily blends in with virtually every instrument. Described as “the musical equivalent of the artists’ palette,” it has inspired some of the most beautiful music ever written.

Who invented the piano, and why is it still popular today?\*

### The Piano’s Ancestors

The harp and the lyre were among the earliest hand-plucked stringed instruments. (Genesis 4:21) Later came the dulcimer, whose player hit the strings with small hammers. In Europe during the Middle Ages, instruments were developed with a keyboard for plucking or striking the strings, the most popular being the clavichord and the harpsichord. The clavichord was shaped like a rectangular box with a lid, and its strings were struck from below by little metal strips called tangents. It played expressively, but its tiny voice was easily drowned out by other instruments and by singers. The bigger harpsichord, looking rather like the modern grand piano, had long strings that were plucked by quills or plectra. It produced a strong, resonant tone but without any variation of volume.

By 1700, with new dramatic, expressive music being composed, musicians wanted a

keyboard instrument that played sensitively, as the clavichord did, but with the power of the harpsichord.

### The Piano Arrives

The Italian instrument maker Bartolomeo Cristofori combined the basic design of the harpsichord with the hammer action of the clavichord, using small leather-topped wooden hammers to strike the strings. He called his invention the *gravicembalo col piano e forte* (harpsichord with soft and loud), shortened to the pianoforte, or piano. Here was a keyboard instrument that had a fuller, richer tone and could be played softer or louder.

Sadly, Cristofori did not live to see the success of his new instrument. Because few people showed interest in it, he went back to making harpsichords. Almost 30 years after Cristofori’s first piano, German organ builder Gottfried Silbermann took another look at the design and started making his own

\* See *Awake!* of November 8, 2002, pages 19-21.



pianos. Craftsmen in Germany and Austria continued to experiment, concentrating on building a smaller, lighter model called a square piano.

In England another group of piano makers were at work. They had emigrated from Germany in the late 1750's. One of them, Johannes Zumpe, developed a version of the square piano that sold well. Sébastien Érard of France and other makers in Europe and America added further improvements. Astute Scottish cabinetmaker John Broadwood perceived that the piano would be ideal for the young ladies of the newly affluent middle class. Soon his company was busy turning out large numbers of both square and grand pianos.

The next challenge was to design a compact piano with the superior sound of a grand. So pianos were built upward and not outward, becoming ever larger. The vertical strings of one Broadwood model rose nine feet above the keyboard; but being distinctly top-heavy, it proved too dangerous to play! Another upright called the giraffe model was really a grand piano set on end with its tail in the air. John Isaac Hawkins, an Englishman, designed the first successful upright in 1800 by placing the lower end of the strings near floor level. This eventually led to the phasing out of the square piano.

### Composers Discover the Piano

In the meantime, composers began to discover the piano. When young Wolfgang Amadeus Mozart visited Johann Stein's Bavarian workshop in 1777 to try the new instrument, he was impressed. Soon he was writing music for it, composing no less than 15 piano concerti in just four years! However, it was Ludwig van Beethoven a few years later who did much to open up the possibilities of this new instrument. He made the piano live, almost sing. Here was the instrument the musical world had been waiting for, and a new wave of romantic, passionate music burst onto the scene. Frédéric François Chopin, "the poet of the piano," found it the perfect medium for expressing thoughts and feelings. Franz Liszt wrote exciting original music that made the piano sound like an orchestra. He also electrified audiences with his virtuosity.

Unfortunately, the piano's all-wood frame and thin strings were ill-equipped to survive the loud, passionate music of a vigorous concert. Makers, therefore, began adding iron bracing until they perfected a single-cast iron frame. Now they could use thicker strings and heavier hammers to produce greater volume. The resulting rather harsh sound was remedied by felt-covered hammers. Longer strings stretched diagonally over shorter ones further improved the tone and saved space.

**The Player Piano** For people with little keyboard experience, the player piano was the answer. A combination of music box and piano, its keys moved up and down by themselves, activated by perforations on a moving paper roll. In the early models of the 1890's, a mechanism in front of the piano pressed the keys with wooden fingers while the operator pumped the foot treadles. Later models had the device built into the piano. The more advanced "reproducing piano" recreated the actual performances of great pianists, and their recorded piano rolls were reproduced for sale, as modern-day discs or tapes are. By 1925, more player pianos were being made in the United States than conventional instruments. However, as a result of the advent of the radio and the gramophone, by the 1930's the player piano had virtually disappeared.



Culver Pictures





The modern piano had arrived and with it scores of great pianists who packed concert halls with enthusiastic audiences anxious to hear their increasing repertoire of piano music. Meanwhile, piano makers in Europe and America mass-produced instruments as fast as they could to meet the phenomenal demand.

### Everywhere a Piano

At the beginning of the 20th century, every home there had to have the new status symbol, whether anyone in the household could play it or not. Pianists were in demand to entertain customers and travelers, provide background music for the new silent movies, and teach a growing number of aspiring amateurs. Family get-togethers centered around the piano. Amateurs staged their own musical productions. New piano music came out regularly. Distinctively different playing styles developed too—the catchy, syncopated ragtime, the slow rhythm of the blues, the persistent beat of the boogie-woogie.

The downturn came after the first world war. From a peak production of 600,000 worldwide in 1910, piano sales gradually dropped. The phonograph, radio, record player, and eventually television took over home entertainment. But the world had not seen the last of the piano. New technical advances after World War II brought a revival. By 1980, production had climbed back to over 800,000. Today's lighter pianos are made of plastic and alloys, and their white keys are covered by synthetic material instead of ivory. Japan has become one of the world's largest manufacturers, and China has embraced what it refers to as "the queen of instruments."

### Would You Like to Play the Piano?

On some instruments it would take much practice for you to produce even a sound, but press a few piano keys in the right order and you are already making music! A few people are gifted with the ability to play by ear. However, most find that simple, do-it-yourself manuals soon teach them to play a melody with their right hand while the left provides the accompaniment. Imagine your sense of achievement when you can play a favorite melody for yourself with the help of sheet music! Will you choose a stirring march, a gentle waltz, or perhaps a favorite ballad?

Maybe you will play the rhythms of Latin America or perhaps some jazz. What fun it is to play a duet with a friend! Think, too, of the pleasure you could give by accompanying a group of friends as they sing or play other instruments around you. Are you inspired to try this world of music for yourself?

## How a Grand Piano Works

Over 200 parallel steel-wire strings at high tension produce 88 notes. Short, thin strings that vibrate quickly produce high notes, while long, thick strings, often wound with copper, produce bass notes. All except the lowest bass notes are produced by two or three strings tuned in unison.

When a player presses a piano key (1), levers propel a padded hammer to hit the one or more strings of that key's note and instantly jump away. Keeping a finger on the key makes the string continue to vibrate and the sound die away slowly. When the player takes his finger off the key (2), a damper presses against the string to silence it. If the right-hand pedal at the foot of the piano is pressed, it holds all the dampers away and lets succeeding notes enrich one another.

The strings pass over strips of wood called bridges (3), attached to the wooden soundboard (4), which vibrates in tune and greatly intensifies the strings' power and resonance. The surrounding wooden case acts like a sound box to increase the volume.

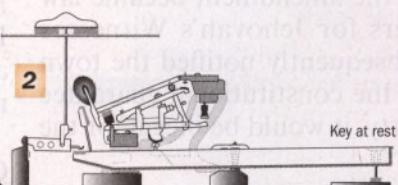
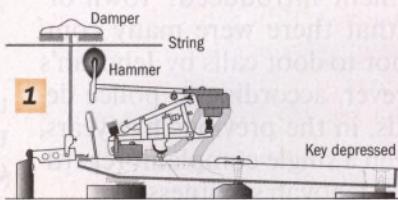
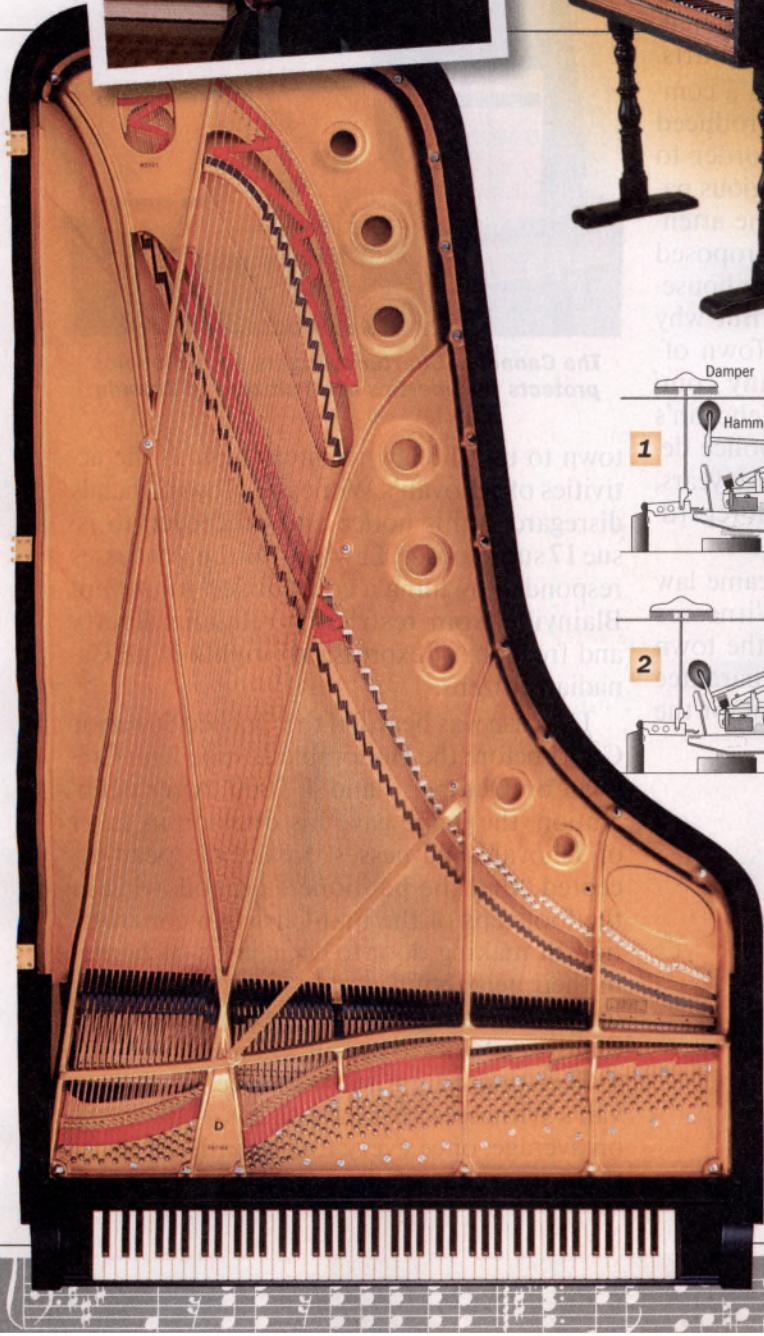
The strings are joined to a cast-iron frame by steel pins (5). The frame of a grand piano needs to be strong enough to withstand a combined string pull of up to 30 tons.



Cristofori's earliest surviving piano,  
1720



The Metropolitan Museum of Art, The Crosby Brown Collection of Musical Instruments, 1889. (89.4.1219) Photograph ©1983  
The Metropolitan Museum of Art



# "A CITY COUNCIL SHOULD

BY AWAKE! WRITER IN CANADA

THE Canadian Charter of Rights and Freedoms protects the liberties of all citizens of Canada. Freedoms of speech, press, and worship are constitutionally established and enforceable by the courts.

Thus, when the town of Blainville, a community northwest of Montreal, introduced an amendment to their bylaws in order to prohibit door-to-door 'visits of a religious nature' without a permit, it aroused the attention of Jehovah's Witnesses. The proposed amendment would directly affect their house-to-house ministry. (Acts 20:20, 21) But why was the amendment introduced? Town officials claimed that there were many complaints about door-to-door calls by Jehovah's Witnesses. However, according to police department records, in the previous five years, there had not been a single complaint regarding the activity of Jehovah's Witnesses!

Nevertheless, the amendment became law in 1996. Lawyers for Jehovah's Witnesses in Blainville subsequently notified the town that because of the constitutional guarantee of religious liberty, it would be illegal for the



*The Canadian Charter of Rights and Freedoms protects the liberties of all citizens of Canada*

town to use the law to interfere with the activities of Jehovah's Witnesses. Town officials disregarded this notice and proceeded to issue 17 summonses. Lawyers for the Witnesses responded by filing a court action to prevent Blainville from restricting religious liberty and freedom of expression—rights of all Canadian citizens.

The case was heard in the Quebec Superior Court before the Honorable Justice Jean Crépeau on October 3 and 4, 2000. After deliberation, the judge gave his decision in favor of Jehovah's Witnesses. Justice Crépeau accepted "that the petitioners are following in the footsteps of the first Christian congregation in making door-to-door visits of homes in their neighbourhood to encourage people to maintain a high level of morality and spirituality.... Visits to people's homes constitute a Christian community service. The Jehovah's Witnesses visit the citizens of Blainville on average, once every four months to invite them to exchange ideas on subjects that are

CANADA

Blainville, <sup>qc</sup> Montreal

U.S.A.

# NOT PLAY BIG BROTHER"

positive and of common interest." In his judgment Justice Crépeau stated: "[The Court] declares the Jehovah's Witnesses exempt from the requirement of obtaining a permit in order to carry out their ministry."

Blainville appealed Justice Crépeau's decision to the Quebec Court of Appeal. The appeal was argued on June 17, 2003, and a judgment was rendered on August 27, 2003, upholding the decision of the trial judge. Citing the Canadian Charter of Rights and Freedoms, which protects freedom of religion and includes the right to manifest religious beliefs by teaching and dissemination, the Court issued a statement saying: "The impugned by-law severely restricts the freedom of religion of Jehovah's Witnesses and the freedom of thought, belief, opinion and expression of the citizens of Blainville . . . The evidence shows that the residents of Blainville were not complaining of abusive solicitation by Jehovah's Witnesses but by numerous peddlers and itinerant merchants. There was no pressing and substantial need to regulate door-to-door canvassing for religious purposes. Moreover the measures enacted were negligently drafted and adopted in a hurry without prior consultation, and are irrational and disproportionate in their effects to the stated goal of protecting the privacy of the citizens. . . . In a free and democratic society, a city council should not play Big Brother in trying to decide who the residents may receive at their home during the evening or the

weekend. The trial judge was right to declare the impugned by-law of no force or effect towards Jehovah's Witnesses."\*

Jehovah's Witnesses rejoice that the courts of Quebec have applied the Charter of Rights in this case to protect the religious liberty of all Quebec citizens from petty oppression.

\* "Big Brother" is a reference to the George Orwell novel *Nineteen Eighty-four* in which a fictional totalitarian state exercises control over its citizens by means of the omnipresent leader of the party, Big Brother, who is aware of all that is said and done in the state.

***Witnesses can now freely engage in the public ministry in Blainville.  
Inset: Meeting at their Kingdom Hall***



# WHAT DOES IT MEAN TO BE THE HEAD OF THE HOUSE?

ACCORDING to the Bible, "the head of a woman is the man." (1 Corinthians 11:3; Ephesians 5:23) But many who profess respect for the Bible feel that this principle of husbandly headship is not only outdated but also dangerous. "The doctrine that women should 'submit graciously' [to their husbands], taken to an extreme, can lead to abuse, both physical and emotional," commented one couple. Sadly, abuse of headship is widespread and rampant. "Wife-beating," says one author, "is considered part of the natural order in many countries—a masculine prerogative celebrated in songs, proverbs and wedding ceremonies."

***A husband who is reasonable takes into account the opinions of his wife and children***

Some suggest that the Bible principle of headship has led to these brutalities. Does the Bible's concept of headship demean women and encourage domestic violence? What does it really mean to be the head of the house?\*

### **Headship Is Not Tyranny**

Biblical headship is a loving arrangement and is by no means synonymous with tyranny. It was disregard for divinely constituted authority that resulted in man's often brutal

\* Although this article primarily discusses the role of a husband and father in the family, single mothers and orphans who must care for their siblings may also benefit from the principles given to family heads.



domination of women. (Genesis 3:16) Since the garden of Eden, men have frequently abused their power, viciously exploiting others, including women and children.

However, that was never part of God's purpose. Jehovah abhors those who abuse their authority. He condemned Israelite men who "dealt treacherously" with their wives. (Malachi 2:13-16) Furthermore, God says that "anyone loving violence His soul certainly hates." (Psalm 11:5) So wife beaters and other abusers cannot in any way use the Bible to justify their violent actions.

#### **What Does Proper Headship Involve?**

Headship is a fundamental arrangement that God uses to maintain universal order. Everyone other than God himself is accountable to someone. Men are subject to Christ, children are subject to their parents, and all Christians are subject to governments. Even Jesus is subject to God.—Romans 13:1; 1 Corinthians 11:3; 15:28; Ephesians 6:1.

Subjection to leadership is necessary for an orderly, stable society. Likewise, subjection to a family head is essential to building a solid, happy, peaceful family. The lack of a husband or a father in the family does not change this fact. In such families the mother assumes headship. When both parents are missing, the oldest child or another relative may take on the role of head of the house. In all cases, family members benefit when they show proper respect to the one authorized to take the lead.

The key, then, is not to reject the headship principle but, rather, to learn to exercise and view headship properly. The apostle Paul exhorts Christian husbands to be the head of their household "as the Christ also is head of the congregation." (Ephesians 5:21-23) Paul thus points to the way Christ dealt with the congregation as the perfect standard of headship. What example did Christ set?

Although as Messiah and future King, Jesus had authority from God himself and was far more intelligent and experienced in life

than his disciples, he was loving, warm, and compassionate. He was never harsh, unyielding, or overly demanding. He did not throw his weight around and constantly remind everyone that he was the Son of God. Jesus was humble, lowly in heart. As a result, 'his yoke was kindly and his load was light.' (Matthew 11:28-30) Therefore, he was approachable and open to reason. In fact, Paul says that Jesus loved the congregation so much that he "delivered up himself for it."—Ephesians 5:25.

#### **How Can One Imitate Jesus' Headship?**

How can family heads imitate Christ's qualities? A responsible head shows concern for his family's physical and spiritual welfare. He puts himself out by giving appropriate time and attention to their individual and collective needs. The interests of his mate and children come before his own.\* (1 Corinthians 10:24; Philippians 2:4) By applying Bible principles and teachings in his daily life, the husband wins the respect and support of his wife and children. Under his loving headship, their joint efforts in coping with any problems can be successful. By thus exercising his headship in a Scriptural way, the husband is building a happy family, one that functions to God's glory and praise.

A wise head is also humble. When necessary, he will freely apologize, even though he may find it difficult to admit that he was wrong. The Bible says that there is salvation "in the multitude of counselors." (Proverbs 24:6) Yes, humility will also motivate a family head to listen to and actively seek the opinion of his wife and children when appropriate. By imitating Jesus, a Christian head will ensure that his headship not only brings happiness and security to his family but also honors and glorifies the Originator of families, Jehovah God.—Ephesians 3:14, 15.

\* The book *The Secret of Family Happiness*, published by Jehovah's Witnesses, provides practical suggestions on how to care lovingly for the family.

# Watching the World

## France Felt the Heat

Temperatures in France hit all-time records during the first 12 days of August 2003. Never—since temperatures began to be recorded in 1873—had Paris gone through such a hot summer. “According to [the French meteorologic services], this heat wave, in its intensity and duration, beat anything previously experienced there,” reports the nature magazine *Terre sauvage*. In just two months, one glacier in the Pyrenees, on France’s southern border, retreated some 150 feet. “In 150 years the total surface area of Pyrenean glaciers has gone from ten or eleven square miles to two square miles,” said glaciologist Pierre René. Is this evidence of global warming? Experts remain divided. However, it is the opin-

ion of some meteorologists that heat waves are likely to become a more common phenomenon in the years to come—a worrisome possibility in view of the fact that the torrid heat of last summer is estimated to have caused nearly 15,000 deaths in France.

## Male Depression

“One of the saddest things about depression is the lingering myth that it is mostly a ‘female disorder’ from which ‘real men’ are genetically protected,” states *The Star* newspaper of Johannesburg. “Specialists say depression remains hidden in men because men visit health professionals less often than women, with less opportunity to talk about their problems,” and they are less able “to articulate emotional distress.” So doctors are more famil-

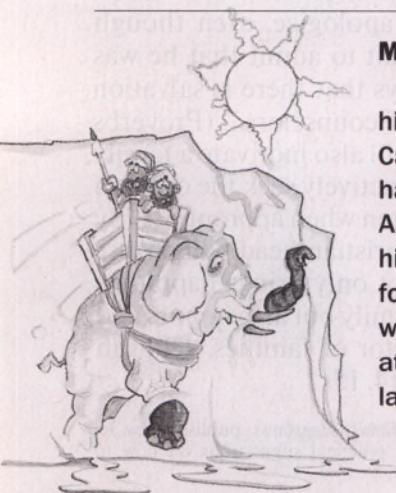
iar with symptoms that are common in female victims of depression. “In women,” explains *JAMA*, “depression has a notably different constellation of symptoms than in men.” What are some of the symptoms common in male depression? Anger, fatigue, irritability, aggression, a drop in work performance, and a tendency for the sufferer to isolate himself from loved ones and friends. “Sadness,” adds a South African edition of *Reader’s Digest*, “doesn’t always accompany depression—especially for men.”

## Catholic Priests and Bible Knowledge

“How well acquainted with the Bible are priests?” This question was posed by Andrea Fontana, who is himself a priest and the director of the Turin Diocesan Office for Catechism. Writing in the

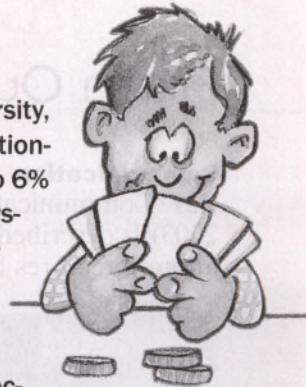
## Melting Glacier Archaeology

Retreating glaciers expose many remains that are of great interest to historians, says the German newsmagazine *Der Spiegel*. In 1999 in the Canadian Rocky Mountains, such a glacier revealed an Indian male who had died 550 years ago. Most remains, however, have been found in the Alps. For example, the remains of a man who was thought to have left his girlfriend and illegitimate child in the lurch in 1949 were recently found. He had actually fallen into a crevasse, and the engagement rings were in his bag. According to Harald Stadler, head of glacier archaeology at Austria’s Innsbruck University, the historian’s dream is to find items relating to Hannibal, the famous Carthaginian commander who crossed the Alps with 37 elephants. “An elephant bone would be a sensation,” he said.



## Teen Gambling

According to the International Centre for Youth Gambling at McGill University, "more than half of Canadian youngsters aged 12 to 17 are considered recreational gamblers, 10% to 15% are at risk for developing a severe problem and 4% to 6% are considered 'pathological gamblers,'" reports Toronto's *National Post* newspaper. The allure often begins in early childhood when some children receive lottery tickets as gifts or use the Internet to bet on-line. The result, say researchers, is that more Canadian teenagers now engage in gambling than in other addictive behaviors, such as smoking or drug abuse. Educators hope that teen gambling-prevention programs at Canadian high schools will be effective in curbing the problem.



Italian Catholic newspaper *Avenire*, Fontana said that the question came to mind when "a layman approached [him] to ask if the diocese had any Bible study courses." In the layman's parish, "the Holy Scriptures were never mentioned." In answer Fontana wrote: "In truth, after the seminary courses [priests] attend, sadly, few continue to study the Bible. . . . Sunday homilies are often the only moment in which many of the faithful have the opportunity to hear something about the Bible text and draw close to it." The layman had said that "he himself associated with Jehovah's Witnesses to learn more."

## Problems Connected With Obesity

Obesity is increasing in America. According to estimates from the U.S. Centers for Disease Control and Prevention, the number of obese American adults has increased from 12.5 percent of the population in 1991 to

20 percent in 2003. This increase has affected a number of businesses. "Like the airline industry, which was warned in May [2003] that passengers were heavier than they used to be, and was asked to adjust weight estimates accordingly, the funeral industry is retooling to make room for ever-larger Americans," notes *The New York Times*. While the standard coffin is 24 inches wide, coffins are now available up to 49 inches in width and suitably reinforced. "Vaults, graves, hearses and even the standardized scoop on the front-end loaders that cemeteries use for grave-digging" have also had to be increased in size. "People are living larger and they're dying larger, and industries have to adapt to that situation," states Allen Steadham, executive director of an advocacy group for the obese.

## The Dead Sea Is Dying

"The Dead Sea is dying, and only a major engineer-

ing effort can save it," states an Associated Press dispatch. The Dead Sea—so called because its high salt content makes it impossible for aquatic creatures to live in it—is the earth's lowest body of water, 1,320 feet below sea level. "For millennia, the balance [between high evaporation and incoming water] was maintained by the Dead Sea's only water source, the Jordan River," says the article. "In recent decades, however, both Israel and Jordan have been tapping in to irrigate large swaths of agricultural land along the narrow river that divides the two countries, robbing the Dead Sea of its replacement water." If nothing is done, says an Israeli study, the water level will continue to drop by up to three feet a year, with devastating consequences to the surrounding land, including its wildlife and vegetation. A five-year drought is already adding to the woes of the Dead Sea.

# From Our Readers

**Communication** I just had to write about the series "Communication—Vital to Life." (September 22, 2003) It described the pattern seen throughout creation—creatures helping one another. Even plants signal to warn one another of predators! It will be wonderful when humans likewise learn to care for one another.

C. C., United States



I loved your descriptions of how animals communicate with one another. We cannot help but conclude that there is a God who is the source of all these wonderful things.

R. Z., Germany

I don't have words to express the joy I experienced as I read those articles. What an incredible privilege we have of being able to communicate with God!

A. W., South Africa

This morning when I started reading, I was really feeling down. But the material on how insects communicate with one another made me laugh. I left for work with a smile on my face.

L. L., France

**Tattoos** Thank you very much for the article "Young People Ask . . . Should I Get a Tattoo?" (September 22, 2003) I really thought tattoos were cool and wanted to get a temporary tattoo sticker. However, the statement that we wouldn't want to make markings on our body that dishonored God "even temporarily" really hit me. When I considered that wearing a tattoo could stumble others and cause others to view me as rebellious, I decided not to do so.

A. K., Japan

I would have really loved to get a tattoo. But this article helped me to realize that I might regret it later. You also noted the health dangers, which I had not considered. Thank you for such a convincing article.

D. T., France

**Piñatas** I read with interest the article "The Piñata—An Ancient Tradition." (September 22, 2003) It left me with some questions. The ties to false religion are well-documented. But the article seemed to take the position that as long as it doesn't bother someone's conscience, it is OK. What about birthdays and holidays such as Christmas?

S. W., United States

*"Awake!" responds: Christians refrain from any celebrations or customs that continue to involve false religious beliefs or activities that violate Bible principles. For example, the Bible definitely puts birthday celebrations in a bad light. (Genesis 40:20; Matthew 14:6-10) However, if it is very obvious that a custom has no current false religious significance and involves no violation of Bible principles, each Christian must make a personal decision as to whether he will follow such a custom.*

**Scientist's Story** Thank you so much for the splendid article "Science Was My Religion." (September 22, 2003) Kenneth Tanaka was not afraid to face the facts. He also humbly admitted that what he had believed for many years had been wrong. He has the right spirit.

S. A., Russia

I have been suffering from depression, fighting the feelings of wanting to die. Then I read the question in Kenneth Tanaka's article, "If non-existence were the ultimate destiny, how could there be any meaning in existence?" This touched my heart. It was as if God were saying, "Go on living!"

C. I., Japan

# Would You Care to Try Some SQUASH BLOSSOMS?

BY AWAKE! WRITER IN MEXICO

WHEN the squash plants blossom, the vegetable garden looks more like a flower garden. The graceful yellow flower—of an elegant, simple design—does not perfume the air, but it certainly makes our mouth water. Do we mean that people actually eat flowers? Yes. In fact, according to the journal *Cuadernos de Nutrición*, it can be said that Mexico is the country in which the greatest number of recipes include flowers.

As for the squash blossom, it has been eaten here for centuries. Of the many varieties of squash, probably the flower of the zucchini is the one most used for food. But we have to be careful to use only the male flowers if we want to enjoy the vegetable too. We simply look at the stem. The appearance of a tiny squash on it means that we have a female flower in our hands and that we had better not pick it.

The mild flavor of the squash blossom combines well with a variety of dishes. Often, we sauté some garlic and onion and perhaps some hot peppers. When all of this is seasoned and the garlic is transparent, we add some washed and chopped blossoms from which we have removed the stems. We then cover the mixture and let it simmer for a few minutes. Zucchini cut into cubes, fresh maize grains, a little butter, and aromatic



herbs can also be added along with the blossoms. We put this mixture on an uncooked tortilla and fold it. Then, we let the tortilla cook on the griddle, producing a delicious squash-blossom quesadilla.

Our quesadilla is not only good tasting but also nutritious, since the squash blossom contains small quantities of protein, calcium, iron, thiamine, niacin, ascorbic acid, and retinol.

We also make a delicious soup with this flower. We simply follow the procedure above, add some broth, and then serve it hot. We may garnish it with some cheese and fried tortilla strips.

Many other dishes can be prepared with this versatile flower. So why not create a squash-blossom dish? You will love it!



# A DISCERNING MOTHER

A mother who discerns and cares for the needs of her children makes diligent efforts to supply them with nutritious physical food. She manifests the same diligence in providing spiritual sustenance.

Recently, a woman in Brazil wrote to the branch office of Jehovah's Witnesses in that country expressing appreciation for the publication *What Does God Require of Us?* "The brochure simply touched me," she wrote. "On glancing through a lesson about practices that God disapproves, it immediately occurred to me that I should share this important information with my children—two girls, aged 10 and 11, and a 5-year-old boy." She added: "How im-

portant it is to have literature like this to teach God's ways to my family!"

