

Awake!

May 22, 2000



Chronic Illness Coping as a Family

Average Printing 20,381,000
Published in 82 Languages

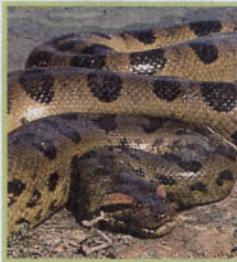
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When Chronic Illness Strikes a Family

THE Du Toit family's happiness is infectious. Their warm love for one another is a delight to behold. Meeting them, you would never guess that they have endured so much hardship.

To begin with, when their first child, Michelle, was two, Braam and Ann learned that she had a chronic hereditary disease that causes debilitating muscle weakness.

"All of a sudden," explains Ann, the mother, "you have to learn how to cope with a crippling chronic illness. You realize that family life will not be the same."

But after another daughter and a son were born, further tragedy beset this family. One day when the three children were playing outside, the two girls came running into the house. "Mommy! Mommy!" they cried. "Come quickly. There's something wrong with Neil!"

Rushing out, Ann saw three-year-old Neil's head flopped helplessly to one side. He was unable to hold his head upright.

"The shock was terrible," recalls Ann, "and the realization was instantaneous. I was heartsick that this healthy little boy would have to face the challenge of living with the same debilitating muscle weakness that his older sister had."

"The joy of starting off with a healthy family," says the father, Braam, "was soon overshadowed by some of the greatest challenges that we have ever had to face."

Eventually Michelle, despite receiving the best of hospital treatment, died as a result of complications caused by her illness. She was just 14 years old at the time. Neil continues to battle the effects of his illness.

This raises the question, How do families such as the Du Toits cope with the challenges of having a chronically ill family member? In order to answer that question, let us analyze some of the ways families are affected by chronic illness.





Chronic Illness A Family Affair

WHAT is chronic illness? Simply put, it is illness that lasts a long time. Additionally, one professor explains chronic illness as "an altered health state that will not be cured by a simple surgical procedure or a short course of medical therapy." What makes chronic illness or its effects so challenging is not just the nature of the sickness and the treatment but that it has to be endured for so long.

Furthermore, the effects of chronic illness are seldom limited to just the patient. "Most people are part of a family," states the book *Motor Neurone Disease—A Family Affair*, "and the shock and anxiety felt by you [the patient] will be shared by those close to you." This is confirmed by a mother whose daughter had cancer. "Every member of the family is affected," she says, "whether or not they show it or are aware of it."

Of course, not everyone will be affected in the same way. However, if family members understand how chronic illness affects people in general, they will likely be better

equipped to meet the specific challenges of their particular situation. In addition, if those outside the family circle—workmates, schoolmates, neighbors, friends—understand the impact of chronic illness, they will be better able to provide meaningful and empathetic support. With this in mind, let us look at some ways in which families might be affected by chronic illness.

Journey Through a Strange Land

A family's experience with chronic illness could be likened to their taking a journey through a foreign land. While some things will be much the same as they are in the family's homeland, other things will be unfamiliar or even radically different. When chronic illness afflicts a family member, many things will remain largely unchanged in the family's life-style. However, some things will be very different.

For a start, the illness itself may impact on the family's normal routine and force each family member to make adjustments in order to cope. This is confirmed by 14-year-

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Unless otherwise indicated, *New World Translation of the Holy Scriptures—With References* is used.

Awake! (ISSN 0005-237X) is published semimonthly by Watchtower Bible and Tract Society of New York, Inc.; Milton G. Henschel, President; Lyman A. Swingle, Secretary-Treasurer; 25 Columbia Heights, Brooklyn, NY 11201-2483. Periodicals Postage Paid at Brooklyn, N.Y., and at additional mailing offices. **Changes of address** should reach us 30 days before your moving date. Give us your old and new address (if possible, your old address label). **POSTMASTER:** Send address changes to *Awake!*, c/o Watchtower, Wallkill, NY 12589.

Vol. 81, No. 10 Printed in U.S.A. © 2000 Watch Tower Bible and Tract Society of Pennsylvania. All rights reserved.

Semimonthly ENGLISH

old Helen, whose mother suffers from severe chronic depression. "We adjust our schedule to what Mom can or cannot do on any given day," she says.

Even the therapy—which is intended to provide relief from the illness—may cause further disruption of the family's new routine. Consider the example of Braam and Ann, mentioned in the preceding article. "We had to make major adjustments in our daily routine because of our childrens' therapy," says Braam. Ann explains: "We were going back and forth to the hospital every day. Then, in addition to that, the doctor recommended that we give the children six small meals a day to compensate for the dietary deficiencies caused by their disease. For me, it was a whole new way of cooking." An even greater challenge was helping the children to do the prescribed muscle-strengthening exercises. "That," recalls Ann, "was a daily battle of wills."

As the patient adjusts to the discomfort—and sometimes the pain—of medical treatment and the scrutiny of medical

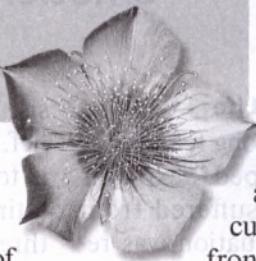
personnel, he becomes increasingly dependent on the family for practical assistance and emotional support. As a result, not only do family members have to learn new skills to manage the physical care of the patient but they are all compelled to adjust their attitudes, emotions, life-styles, and routines.

Understandably, all these demands increasingly tax the family's endurance. A mother whose daughter was in a hospital being treated for cancer confirms that it can "be more tiring than anyone else could ever imagine."

Ongoing Uncertainty

"The continuous ups and downs of chronic illness present a threatening sense of uncertainty," states *Coping With Chronic Illness—Overcoming Powerlessness*. Just when family members are adjusting to one set of circumstances, they may be confronted with altered and possibly more difficult ones. Symptoms may be erratic or may suddenly get worse, and therapy may fail to provide anticipated improvement. The treatment may have to be

Families need to care for the patient and adjust their own attitudes, emotions, and life-style



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changed periodically or may result in unforeseen complications. As the patient becomes more dependent on the support that the bewildered family may be straining to supply, previously controlled emotions may suddenly explode.

The unpredictable nature of many illnesses and treatments inevitably raises such questions as: How long is this going to continue? How much worse will the illness get? How much more of this can we take? Terminal illness often prompts the ultimate uncertainty—"How long will it be before death strikes?"

The illness, treatment regimens, exhaustion, and uncertainty all combine to bring about another unexpected consequence.

Effects on Social Life

"I had to work through strong feelings of isolation and of being trapped," explains Kathleen, whose husband suffered from chronic depression. "The situation was relentless," she continues, "because we were never able to extend or accept invitations to socialize. Eventually, our social contacts were virtually nonexistent." Like Kathleen, many end up having to cope with feelings of guilt for not being hospitable and not accepting invitations. Why does this happen?

The illness itself or the side effects of the treatment may make it difficult or even impossible to share in social events. The family and the patient may feel that the illness carries with it a social stigma, or they may fear that it will cause embarrassment. Depression may make the patient feel unwar-

thy of previous friendships, or the family may simply not have the energy to socialize. For a variety of reasons, chronic illness can easily result in isolation and loneliness for the entire family.

Furthermore, not everyone will know what to say or how to react around a person with a disability. (See the box "How You Can Be Supportive," on page 11.) "When

your child is different from other children, many people tend to stare and make thoughtless remarks," says Ann. "As it is, you tend to blame yourself for the illness, and their comments only add to your feelings of guilt." What Ann says touches on something else that families are likely to experience.

Emotions That Wreak Havoc

"At the time of diagnosis, most families react with shock, disbelief, and denial," states one researcher. "It is too much to bear." Yes, it can be devastating to learn that a loved one has a life-threatening or debilitating illness. A family may feel that their hopes and dreams have been shattered, leaving them with an uncertain future and a deep feeling of loss and grief.

True, for many families that have seen prolonged, distressing symptoms in a family member without knowing the cause, the diagnosis may well provide a sense of relief. But some families may react differently to the diagnosis. A mother in South Africa admits: "It was so painful finally to be told what was wrong with our children that, frankly, I would rather not have heard the diagnosis."



**Both patient
and family will
experience
strong
emotions**

Some Challenges of Chronic Illness

- Learning about the illness and how to cope with it
- Adjusting one's life-style and daily routine
- Coping with changed social relationships
- Maintaining a sense of normality and control
- Grieving over losses that result from the illness
- Coping with difficult emotions
- Maintaining a positive outlook

The book *A Special Child in the Family—Living With Your Sick or Disabled Child* explains that "it is natural for you to go through an emotional turmoil . . . as you adjust to this new reality. Sometimes your feelings may be so intense that you fear you cannot cope with them." The author of the book, Diana Kimpton, whose two sons had cystic fibrosis, relates: "I was frightened of my own emotions and I needed to know that it was alright to feel so bad."

It is not unusual for families to experience fear—fear of the unknown, fear of the illness, fear of the treatment, fear of pain, and fear of death. Children in particular may have many unspoken fears—especially if they are not given logical explanations for what is happening.

Anger too is very common. "Family members," explains the South African magazine *TLC*, "may often become the scapegoats for the patient's anger." Family members, in turn, may feel angry—with the doctors for not detecting the problem sooner, with themselves for passing on a genetic defect, with the patient for not hav-

ing looked after himself properly, with Satan the Devil for causing such suffering, or even with God, feeling that he is to blame for the illness. Guilt is another common reaction to chronic illness. "Virtually every parent or sibling of a child with cancer feels guilt," states the book *Children With Cancer*

—*A Comprehensive Reference Guide for Parents*.

This maelstrom of emotions often results—to a greater or lesser degree—in depression. "This is probably the most common reaction of all," writes one researcher. "I have a file full of letters to prove it."

Yes, Families Can Cope

On the bright side, many families have found that coping with the situation is not nearly as difficult as it first seemed. "The pictures produced by your imagination will be far worse than reality," assures Diana Kimpton. From personal experience she found that "the future is rarely so black as you imagine it in those early days." Be assured that other families have survived their journey through the strange land of chronic illness and that you can too. Many have found that simply knowing that others have coped has provided some relief and hope for them.

A family may logically wonder, though, *'How can we cope?'* The next article will look at some of the ways families have coped with chronic illness.

**Do not
despair. Other
families have
coped, and
you can too**





How Families Cope With Chronic Illness

COPING can be defined as "the ability to deal effectively with and handle the stresses to which one is subjected." (*Taber's Cyclopedic Medical Dictionary*) It involves facing the problems of chronic illness in such a way that you are able to enjoy a measure of control and peace of mind. And in view of the fact that chronic illness is a family affair, the loving and loyal support of each member of the family is needed for the family to cope successfully. Let us consider some of the ways families cope with chronic illness.

The Value of Knowledge

It may not be possible to cure the disability, but knowing how to cope can minimize the mental and emotional impact of illness. This is in harmony with an ancient

proverb that notes: "A man of knowledge is reinforcing power." (Proverbs 24:5) How can a family gain knowledge about how to cope?

The first step is to find a communicative and helpful doctor, one who is willing to take the time to explain everything carefully to the patient and the family. "The ideal doctor," observes the book *A Special Child in the Family*, "cares about the whole family as well as having all the necessary medical skills."

The next step is to keep asking specific questions until you understand the situation as well as you can. Remember, however, that when you are with the doctor, it is easy to get flustered and forget what you wanted to ask. One helpful suggestion is

Questions That a Family Can Ask a Doctor

- How will the illness develop, and with what outcome?
- What symptoms will there be, and how can they be controlled?
- What alternatives are there for treatment?
- What are the possible side effects, risks, and benefits of the different treatments?
- What can be done to improve the situation, and what should be avoided?



to write down questions in advance. In particular, you may want to know *what to expect from the illness* and the treatment and *what to do about it*.—See the box “Questions That a Family Can Ask a Doctor.”

It is particularly important to provide adequate information to the siblings of a chronically ill child. “Explain what is wrong from the earliest days,” recommends one mother. “They can easily feel pushed out of the family circle if they do not understand what is happening.”

Some families have also been able to find useful information by doing research in a local library, at a bookstore, or on the Internet—very often obtaining detailed information on specific illnesses.

Preserving a Reasonable Quality of Life

It is only natural that family members should want to maintain a reasonable quality of life for the patient. Take, for example, Neil du Toit, mentioned in the first article. He still gets frustrated by the debilitating effects of his disease. Nevertheless, he spends about 70 hours a month doing what he enjoys doing most—talking to people in his community about his Bible-based hope. “It also gives me inner satisfaction,” he says, “to give Bible instruction in the congregation.”

Quality of life also includes the ability to show and receive love, to enjoy pleasurable activities, and to sustain hope. Patients would still like to enjoy life to the extent that their illness and treatment will allow. A father whose family has coped with ill-



Family members should do their best to maintain a reasonable quality of life

ness for over 25 years explains: “We love the outdoors, but because of my son’s limitations, we can’t go on hikes. So we do it differently. We go to outdoor places that don’t require strenuous activities.”

Yes, patients retain abilities that enable them to derive a degree of satisfaction from life. Depending on the nature of the illness, many can still appreciate beautiful sights and sounds. The more they can feel in control of various aspects of their life, the more likely they are to have a reasonable quality of life.

Handling Difficult Emotions

An essential part of coping involves learning how to control harmful emotions.

One of these is anger. The Bible acknowledges that a person might have cause to be upset. However, it also urges us to be "slow to anger." (Proverbs 14:29) Why is it wise to do so? According to one reference work, anger "can eat away at you and make you bitter or lead you to say hurtful things you later regret." Even one outburst of anger can cause damage that may take a long time to repair.

The Bible recommends: "Let the sun not set with you in a provoked state." (Ephesians 4:26) Obviously, we can do nothing to delay the setting of the sun. But we can take steps to settle our "provoked state" speedily so that we do not continue to do damage to ourselves and others. And you are likely to handle a situation far better once you have calmed down.

Like any family, yours will no doubt experience highs and lows. Many find that they cope better when they can confide in one another or in someone else who is compassionate and empathetic. This was certainly Kathleen's experience. She first cared for her mother, who had cancer, and later for her husband, who suffered from chronic depression and eventually Alzheimer's disease. She admits: "It became a source of relief and comfort for me when I could speak with understanding friends." Rosemary, who cared for her

mother for two years, agrees. "Talking to an honest friend," she says, "helped me keep my balance."

Do not be surprised, though, if you cannot hold back the tears as you talk. "Crying releases the tensions and pain, and helps you work through your grief," says the book *A Special Child in the Family*.*

Maintain a Positive Attitude

"Your will to live can sustain you when you are sick," wrote wise King Solomon. (Proverbs 18:14, *Today's English Version*) Modern researchers have noted that patients' expectations—whether negative or positive—often tend to influence the outcome of their treatment. How, though, can a family remain optimistic in the face of a long-term illness?

While not ignoring the illness, families cope better when they focus on things that they are still able to do. "The situation can make you totally negative," admits one father, "but you have to realize that you still

* For a more detailed discussion on how to cope with the emotional impact of illness, please see "Caregiving—Meeting the Challenge," in the *Awake!* of February 8, 1997, pages 3-13.



**Praying with the family
can help them to cope**

How You Can Be Supportive

Some people may refrain from visiting or offering help because they do not know what to say or how to handle the situation. Others may tend to be overbearing and, by imposing what they consider to be helpful, may add to the pressure a family is feeling. How, then, might one be supportive of those having a chronically ill family member without interfering with their privacy?

Listen with empathy. "Be swift about hearing," says James 1:19. Show concern by being a good listener and allowing family members to unburden themselves if they want to speak. They may be more inclined to do so if they sense that you have "fellow feeling." (1 Peter 3:8) Keep in mind, though, that no two individuals or families respond to chronic illness in the same way. Therefore, "don't offer advice unless you really know all about the disease or situation," says Kathleen, who cared for her mother and later her chronically ill husband. (Proverbs 10:19) And remember, even if you do have some knowledge of the subject, the patient and the family may decide not to seek out or accept your advice.

Offer practical help. While being sensitive to the family's need for privacy, be available for them when they really need you. (1 Corinthians 10:24) Braam, who has been

quoted throughout this series, says: "The help of our Christian friends was tremendous. For example, when we slept over at the hospital because of Michelle's critical condition, we always had between four and six of our friends sitting with us right through the night. Whenever we needed help, it was there." Braam's wife, Ann, adds: "It was a bitterly cold winter, and for two weeks we were given a different soup every day. We were nourished by hot soup and plenty of warm love."

Pray with them. At times, there may be little or nothing of a practical nature that you can do. However, few things are as encouraging as sharing an upbuilding Scriptural thought or a heartfelt prayer with patients and their families. (James 5:16) "Never underestimate the power of praying for—and with—the chronically sick ones and their families," says 18-year-old Nicolas, whose mother suffers from chronic depression.

Yes, the right kind of support can do much to help families cope with the stress of chronic illness. The Bible puts it this way: "A friend is a loving companion at all times, and a brother is born to share troubles."—Proverbs 17:17, *The New English Bible*.

have so much. You still have life, one another, and your friends."

Although chronic illness is not to be taken lightly, a healthy sense of humor helps to prevent a spirit of pessimism. The Du Toit's ready sense of humor illustrates the point. Collette, Neil du Toit's youngest sister, explains: "Because we have learned to cope with certain situations, we can laugh at things that happen to us that might seem very upsetting to others. But doing so really helps to relieve the tension." The Bi-

ble assures us that "a heart that is joyful does good as a curer."—Proverbs 17:22.

All-Important Spiritual Values

A vital part of spiritual well-being for true Christians involves 'letting their petitions be made known to God by prayer and supplication.' The result is as promised in the Bible: "The peace of God that excels all thought will guard your hearts and your mental powers." (Philippians 4:6, 7) After almost 30 years of caring for two

chronically ill children, one mother states: "We have learned that Jehovah does help you to cope. He really does sustain you."

Furthermore, many are fortified by Biblical promises of a paradise earth free of pain and suffering. (Revelation 21:3, 4) "Because of the chronic illnesses our family has faced," says Braam, "we find added meaning in God's promise that 'the lame one will climb up just as a stag does, and the tongue of the speechless one will cry out in gladness.'" Like so many others,

the Du Toits eagerly yearn for the time in Paradise when "no resident will say: 'I am sick.'"—Isaiah 33:24; 35:6.

Take heart. The pain and suffering weighing mankind down is in itself part of the evidence that better conditions are imminent. (Luke 21:7, 10, 11) In the meantime, though, scores of caregivers and patients can testify that Jehovah is, indeed, "the Father of tender mercies and the God of all comfort, who comforts us in all our tribulation."—2 Corinthians 1:3, 4.

When the Illness Is Terminal



Some families might be reluctant to discuss the impending death of a terminally ill loved one. However, the book *Caring—How to Cope* states that "if you have some idea of what to expect and what you should do, it may help ease feelings of panic." Although specific steps will vary depending on local laws and customs, here are some suggestions that the family might consider when nursing a terminally ill loved one at home.

Ahead of Time

1. Ask the doctor what to expect in the final days and hours and what must be done if death occurs at night.
2. Make a list of those who will need to be informed of the death.
3. Consider funeral options:
 - What are the patient's wishes?
 - Burial or cremation? Compare the costs and services of different funeral directors.
 - When should the funeral be held? Allow time for travel arrangements to be made.
 - Who will conduct the funeral or memorial service?
 - Where will it be held?
4. Even if sedated, the patient may still be aware of what is being said and done around

him. Be careful not to say anything in front of him that you do not want him to hear. You may want to reassure him with calm talk and by holding his hand.

When the Loved One Dies

Here are some things that others can do to assist the family:

1. Allow the family reasonable time to be alone with the deceased so that they can start to come to terms with the death.
2. Pray with the family.
3. When the family are ready, they might appreciate help in notifying the following:
 - The doctor to certify death and provide a death certificate.
 - A funeral director, a mortuary, or a crematory, to care for the body.
 - Relatives and friends. (You might tactfully say something like this: "I am phoning in connection with [patient's name]. I am sorry to say that I have bad news. As you know, he has battled with [illness] for some time, and he died [when and where].")
 - A newspaper office to place a death notice if desired.
4. The family may want to take someone with them to help them finalize funeral arrangements.

YOUNG PEOPLE ASK . . .

"When she said, 'I'm going to have your baby,' I was shocked. Who was going to care for the baby? I was in no position to care for a family. I felt like running away."

—Jim.*

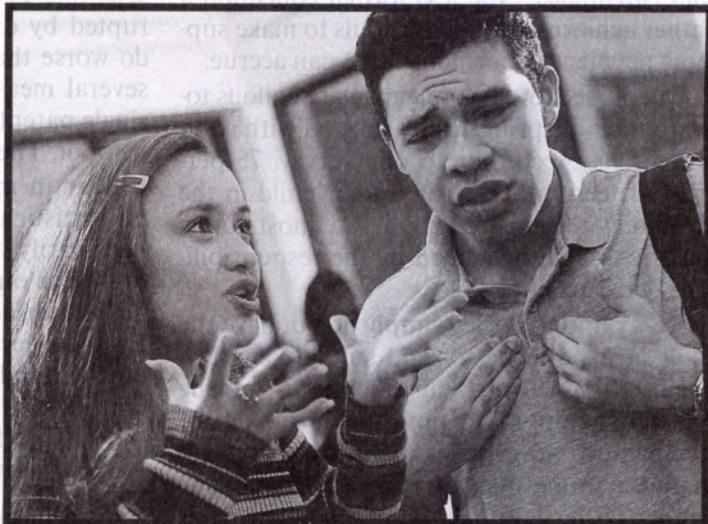
EACH year," says a report from the Alan Guttmacher Institute, "almost 1 million teenage women . . . become pregnant." As many as "78% of births to teens occur outside of marriage."

In days gone by, men felt obliged to take responsibility for the children they fathered. But as the book *Teenage Fathers* says, "out-of-wedlock pregnancy no longer carries the shame and humiliation it [once] did." Among young people in some communities, fathering a child may even be viewed as a status symbol! Still, few young men make long-term commitments to the children they sire. Many eventually walk—or run—away.*

But can a young man fully escape the consequences of immoral conduct? Not according to the Bible. It warns: "Do not be misled: God is not one to be mocked. For whatever a man is sowing, this he will also reap." (Galatians 6:7) As we will see, sexual immorality often results in lifelong consequences for both girls

* Some names have been changed.

See the article "Young People Ask . . . Fathering Children—Does It Make One a Man?" in the April 22, 2000, issue of *Awake!* For a discussion of the effects of unwed motherhood on young women, see the article "Young People Ask . . . Unwed Motherhood—Could It Happen to Me?" in the July 22, 1985, issue.



Runaway Dads—Can They Really Run Away?

and boys. Young people can avoid such consequences by heeding the Bible's clear-cut counsel to avoid sexual immorality.

Walking Away—Not So Easy

Caring for a child involves enormous sacrifices of time, money, and personal freedom. The book *Young Unwed Fathers* notes: "Some young men are not interested in 'taking care of somebody else,' when to do so means having less." Many pay a high price for their selfishness, however. For one thing, the courts and lawmakers in many lands have taken an increasingly dim view of men who fail to support their children. Once paternity has been legally established, young fathers may be required to pay up for years to come—and rightly so. Many youths are forced to quit school or to work at low-paying jobs to meet

such obligations. "The younger the age at parenthood," says the book *School-Age Pregnancy and Parenthood*, "the less formal education a father achieves." And if one fails to make support payments, enormous debts can accrue.

Of course, not all young men are callous toward their offspring. Many start off with good intentions. According to one survey, 75 percent of teen fathers visited their child in the hospital. Still, it isn't long before most young fathers are overwhelmed by the responsibilities of caring for a child.

Many find that they simply do not have the skill or experience to land suitable employment. Ashamed of their inability to provide financial support, in time they drop out of the picture. Nevertheless, pangs of regret can haunt a young man for years to come. One young father admits: "Sometimes I wonder what has happened to my son. . . . I don't feel good about leaving [him], but now I've lost him. Maybe one day he will find me."

The Harm Done to Children

Runaway dads may also have to cope with intense feelings of shame—the shame of having done harm to one's own child. After all, as the Bible indicates, a child needs both a mother *and* a father. (Exodus 20:12; Proverbs 1:8, 9) When a man abandons his child, he exposes his offspring to a host of potential problems. Says a report by the U.S. Department of Health and Human Services: "Young children in single-mother families tend to have lower scores on verbal and math achievement tests. In middle childhood, children raised by a single parent tend to receive lower grades, have more behavior problems, and have higher rates of chronic health and psychiatric disorders. Among adolescents and young adults, being raised in a single-mother family is associated with elevated risks of teenage childbearing, high school dropout, incarceration, and with being neither employed nor in school."

Concludes the *Atlantic Monthly* magazine: "According to a growing body of social-scientific evidence, children in families disrupted by divorce and out-of-wedlock birth do worse than children in intact families on several measures of well-being. Children in single-parent families are six times as likely to be poor. They are also likely to stay poor."

Bear in mind that these risks are based on statistical studies of groups and do not necessarily apply to individuals. Many children turn out to be fine, well-balanced adults despite disadvantaged family backgrounds. Even so, feelings of guilt can weigh heavily on the mind of a young man who has abandoned his child. "I'm afraid I've really [messed up] his life forever," says one unwed father.

—*Teenage Fathers*.

The Challenge of Rendering Support

Not all young fathers are runaway dads. Some young men rightfully do feel a moral obligation toward their children and genuinely want to help in their rearing. Often, though, this is much easier said than done. For one thing, an unwed father may have few legal rights, leaving the girl and her parents to control how much—or how little—contact he can have with his child. "It's a constant jockeying for position to have some say about the child," says Jim, quoted at the outset. Decisions may therefore be made that a young father vehemently opposes, such as adoption—or even abortion.* "It's hard for me to let them just give him away to some stranger," laments one young father, "but I guess I don't have any other choice."

Some young men offer to marry the mother of their child.* Admittedly, marriage would

* See the article "Young People Ask . . . Abortion—Is It the Answer?" in the March 8, 1995, issue of *Awake!*

* The Mosaic Law required a man who had seduced a virgin to marry her. (Deuteronomy 22:28, 29) However, marriage was not automatic, as the girl's father could forbid it. (Exodus 22:16, 17) Although Christians today are not under that Law, this does emphasize how serious the sin of premarital sex is.—See "Questions From Readers" in the November 15, 1989, issue of *The Watchtower*.



***It is best to avoid Immoral conduct
In the first place***

ment and thus try to discourage—or even forbid—the couple from seeing each other. The girl herself may decide that she does not want her child to “bond” with a man who is not her husband. At any rate, if the father is permitted regular contact with his child, families are wise to make sure that visits are well chaperoned, in order to prevent further misconduct.

Desiring to get close to their children, some unwed fathers have learned how to perform some basic parenting tasks, such as bathing, feeding, or reading to their children. A young man who has gained an appreciation for Bible standards may even try to teach his child some of the principles of God’s Word. (Ephesians 6:4) But while *some* loving attention from a father is doubtless better for a child than none at all, it is simply not the same as having a father who is there every day. And if the mother of the child ever gets married, a young father may have to look on helplessly as another man takes over the job of raising his child.

It is clear, then, that fathering a child out of wedlock leads to much misery—for both the parents and the child. Besides the practical concerns, there is the danger of losing the favor of Jehovah God, who condemns illicit sex. (1 Thessalonians 4:3) While it may be possible to make the most of a bad situation like teen pregnancy, it should be clear that the best course is to avoid getting involved in immoral conduct in the first place. One young father admits: “Once you father a child out of wedlock, your life will never be the same.” Indeed, a young father may have to live with the consequences of his error for the rest of his life. (Galatians 6:8) Once again the Bible’s counsel has proved wise when it says: “Flee from fornication.”—1 Corinthians 6:18.

spare the girl some embarrassment and allow the child to be raised by two parents. It may even be that despite their misconduct, the young couple are genuinely in love. However, the fact that a boy is able to reproduce hardly means that he has the mental and emotional maturity needed to be a husband and father. Nor does it mean that he has the ability to support a wife and child financially. Studies show that marriages precipitated by pregnancy tend to be short-lived. So rushing into marriage is not always a wise solution.

Many young men offer to support their children financially. As mentioned earlier, it takes real determination for a young father to keep up such support over the long haul—perhaps for 18 years or longer! But consistent help along these lines can prevent the mother and the child from living a life of poverty.

What about sharing in the actual raising of the child? This too may prove to be a difficult challenge. Sometimes parents of the couple fear that there may be further sexual involve-

Street vendors vie for the attention of passing tourists. A medley of laughter, chatter in different languages, and blaring music fills the square. But wait! Why is the crowd quieting down? It is almost the top of the hour, and all eyes are fixed on two blue windows on the tower of the town hall. Suddenly the windows slide open, and figures representing the apostles of Christ appear. Peter, bearing a large key, heads the procession. As the 12 figures take their turns at the windows, two by two, they seem to survey the crowd below.



WE ARE witnessing the spectacle of the astronomical clock on the Old Town Hall of Prague, in the Czech Republic. Every hour on the hour from eight in the morning until eight at night, this amazing mechanism springs to life. Besides the mechanical parade of apostles, there are other moving figures on the

Vanity and the Miser



A UNIQUE CLOCK IN PRAGUE



outside of the clock. These portray the things that the people of Prague used to fear the most. On one side, weighing his purse in his hand, stands the Miser, representing greed. Near him is Vanity—a man admiring himself in a mirror. Both the Miser and Vanity nod in self-approval. On the other side of the clock stands the skeleton—Death—who tolls a bell with one bony hand and turns over an hourglass with the other. All the while, the skeleton opens and closes its toothy jaws and nods toward the Turk—representing invasion—who stands next to him. The Turk shakes his head, refusing to go with him.

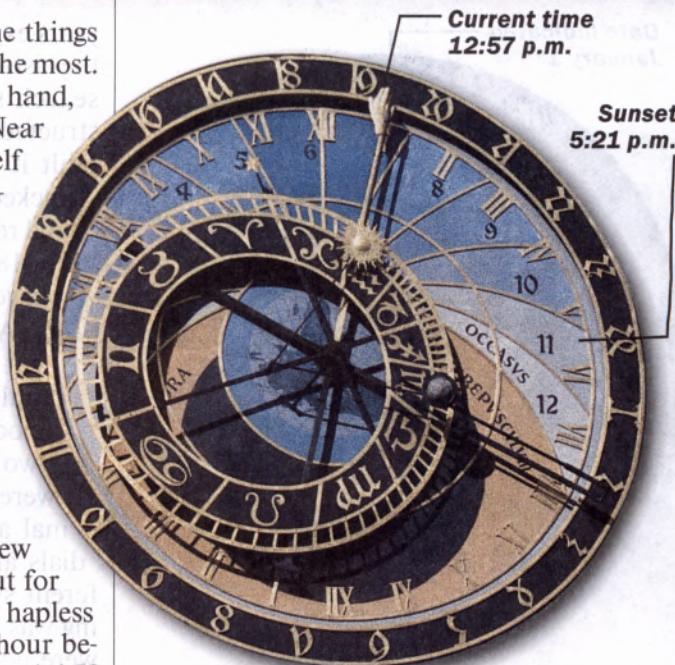
The story is told of a sparrow that flew into the skeleton's mouth just as it shut for the last time in the performance. The hapless sparrow was imprisoned there for an hour before the skeleton opened its mouth again! If people in today's computerized age are fascinated by this entirely mechanical marvel, can you imagine the impression it made on those living hundreds of years ago?

A Closer Look at the Clock

Tourists naturally concentrate primarily on the moving characters, which were added during the centuries after the clock was first installed. But the clock's oldest and most ingenious element is the *astronomical dial*. What can it tell us? First, the time. The black outer ring is marked with gold Gothic numerals ac-



Death and the Turk



THE ASTRONOMICAL DIAL

cording to the old Czech system of dividing the day into 24 hours beginning at sundown. This ring rotates so that the 24th hour always coincides with sunset, regardless of the season. Roman numerals just inside the outer ring divide the day into two 12-hour periods, with noon at the top and midnight at the bottom. The fingers of a golden hand point to the time of day.

Also on the astronomical dial, the movement of a large golden disk indicates the path of the sun, while a small sphere shows the phases of the moon. The apparent rotation of the starry skies around the earth is shown by a smaller, eccentric ring that is marked with the signs of the constellations. Fixed in the middle of the face is the earth, including its meridians, parallels, and poles, with Prague at the center. On the face are also three circles representing the equator and the Tropics of Cancer and Capricorn. The dial thus shows the relative positions of earth, moon, sun, and stars throughout the year. Below the astronomical dial is the *calendar disk*, on which country scenes are painted

Date Indicated

January 1



THE CALENDAR DISK

to depict each month of the year. The calendar disk indicates the date by advancing one of 365 steps each night at midnight, except for one night during leap year.

A look inside the mechanism of the clock reveals a mind-boggling array of big and little wheels. The complicated device is cared for by a mechanic, who checks it thoroughly every week.

The History of the Astronomical Clock

There are many legends linked to Prague's astronomical clock. According to one, a certain Master Hanuš constructed it. So outstanding was the masterpiece that town authorities feared he would build similar clocks elsewhere, thus stealing fame from Prague. To prevent him from doing so, they hired men to assault and blind Master Hanuš. The legend ends with the dying Hanuš reaching into the wheels of the clock and destroying it.

Happily, this is just a tall tale. But Hanuš was a real person, a clockmaker in Prague from 1475 to 1497. For many

years experts believed that it was he who made the astronomical clock. However, recent research shows that Mikuláš of Kadaň constructed the clock as early as 1410. Hanuš rebuilt it in 1490. Since the 16th century, the timekeeping mechanism has been repaired and rebuilt several times. Since being rebuilt in 1865, however, most of its components have remained.

At the end of World War II, Nazi forces set fire to the Old Town Hall as they pulled out of Prague. The astronomical clock was badly damaged. After the war two main proposals to restore the clock were considered—to return it to its original appearance or to supply it with new dials and figures that had a completely different symbolism. In Prague, atheistic thinking was on the rise, and figures of the apostles were not favored by the Communist authorities. Before the design was altered, however, three master watchmakers demonstrated that the clock could be repaired, and so it was restored to its prewar appearance. Thus, today we still see a miser, a skeleton, a Turk, and the apostles, rather than, say, a carpenter, a bricklayer, a tailor, and a laundress.

Finally the Cock Crows

Twelve apostles march in the astronomical clock's procession, but some details are not really Biblical. Judas Iscariot and James the son of Alphaeus have been replaced by Paul and Barnabas, who are not counted among the 12 in the Bible. (Acts 1:12-26) Around the head of each apostle is a halo—a pagan symbol that was not used by the early Christians.

After the last apostolic figure makes its appearance, a gilded cock roosting above the windows crows. The hour is rung, the windows close, and the crowd begins to disperse. Would you like to see it all again? Well, we will have to wait another hour. Meanwhile, we can study the face of this clock, which has been attracting visitors to Prague's Old Town Hall for nearly 600 years.



DOES THE MOON INFLUENCE YOUR LIFE?

FOR thousands of years, men have believed that the moon governs aspects of life on earth. It has been thought that the moon's phases have an effect on plants, animals, and even humans. While some long-cherished notions have been disproved by modern scientific research, other beliefs persist to this day. What do the facts show?

Some people are convinced that there is a connection between the phases of the moon and the growth of plants. Thus, they use calendars and almanacs in deciding when to plant flowers, spread manure, bottle wine, or make preserves. This is done in the belief that if certain tasks are performed during the wrong phase of the moon, the quality of the product will be compromised. One source offers this advice to gardeners: "Vegetables to be eaten fresh should generally be picked during the waxing moon, while vegetables to be preserved should be picked during the waning moon." Is there a scientific basis for this practice?

Some studies seem to link the growth of plants with lunar rhythms. However, many scientists are not convinced. They point out that lunar rhythms are complex, they are not completely regular, and their effects are not marked, so it is difficult to replicate the experiments upon which the studies are based.

Certain lunar effects have been verified, however. For example, it has been shown that the activity, feeding, reproduction, and biological rhythms

Musei Capitolini, Roma

The goddess Selene, worshiped by ancient Greeks and Romans as the personification of the moon

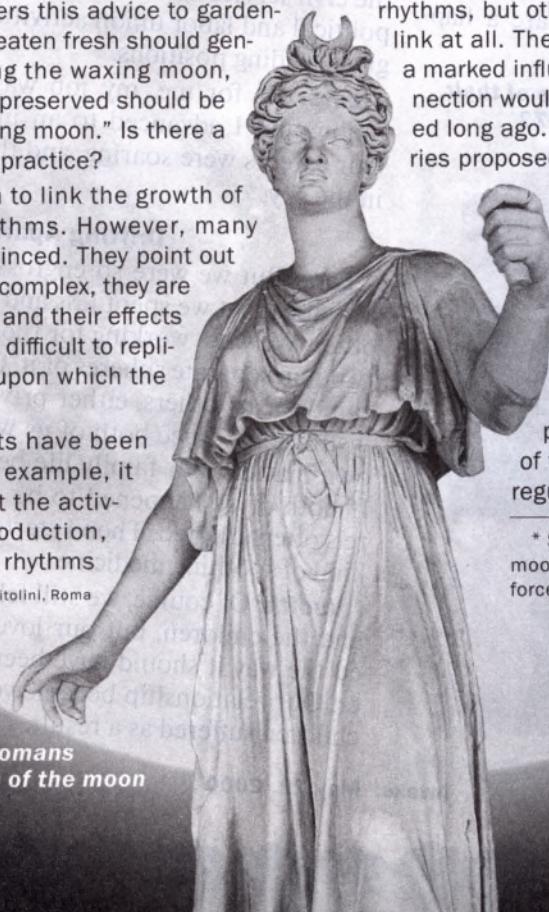
of many living organisms are connected with the tides, which, in turn, are directly influenced by the gravitational force of the moon.

Some claim that if the moon influences the tides, it must affect humans as well, since much of the human body is water. And what of the supposed relationship between the phases of the moon and mental disorders, the time of one's birth, and even the menstrual cycle, the length of which is approximately the same as the lunar month?

Studies have been undertaken in the fields of psychiatry, psychology, and gynecology to get to the truth of the matter. The results have been inconclusive. Some researchers claim to have found slight correlations between human activities and lunar rhythms, but others state flatly that there is no link at all. They argue that if lunar cycles had a marked influence on human births, the connection would have been clearly demonstrated long ago. What is more, none of the theories proposed to explain the supposed lunar effect on man have convinced scientists in general.*

Although science has demonstrated that the moon has some effect on the various forms of life on earth, the extent is not easily determined. Our physical universe is complex, and at least for now, many of the marvelous mechanisms that regulate it remain unknown.

* Some of these theories involve moonlight, gravity, geomagnetic forces, and electromagnetism.



How Our Family Was REUNITED

As told by
Lars and Judith Westergaard

THEIR home looks like a normal setting for any happy family in Denmark. It is a comfortable house with a pleasant garden, situated in a peaceful village. Indoors, a large photograph on the wall shows the healthy and smiling children of the family.

The father, Lars, is an elder in a congregation of Jehovah's Witnesses. His wife, Judith, is a pioneer (a full-time evangelizer). Though they are a hap-

Lars and Judith at the time of their first wedding, in 1973



py couple, that has not always been the case. Lars and Judith have been through trouble and bitterness that resulted in divorce and the splitting up of their family. Now, though, their family is reunited. Why? They themselves explain what happened.

Lars and Judith don't mind telling what went so terribly wrong with their marriage and how they were reunited. They feel that their experience might help others.

It Began So Well

Lars: Our marriage was sheer happiness when it began, in April 1973. The whole world seemed open to us. We knew neither the Bible nor Jehovah's Witnesses, but we were convinced that we could make the world a much better place to live in if all people worked hard enough at it. So we involved ourselves in many political efforts. Our happiness grew as our family was increased by three healthy and lively boys—Martin, Thomas, and Jonas.

Judith: I had an executive position in a branch of the civil service. At the same time, I was engaged in political and labor union activities. I gradually was given leading positions.

Lars: As for me, my job was in a large labor union, and I advanced to an important position. Our careers were soaring, and there wasn't a cloud in the sky.

Drifting Apart

Lars: But we were so engrossed in our separate activities that we spent less and less time with each other. We were working for the same political party but in separate spheres of it. Our three boys were cared for by others, either privately or in day-care institutions. Since both of us were thinking of our own matters, our family life became disorganized. If both of us happened to be at home, loud quarrels often erupted. Then I started using alcohol as a kind of soothing medicine.

Judith: Of course, we still felt love for each other and the children, but our love was never cultivated the way it should have been; it seemed to wither. Our relationship became very negative, and the children suffered as a result.

Lars: In a desperate attempt to get our family back on track, I decided to quit my job. In 1985 we moved out of the city to the village where we live now. Matters improved for a little while, but my wife and I continued to be centered on our separate concerns. Finally, in February 1989, our 16 years of marriage ended in divorce. Our family was in ruins.

Judith: It was terrible to see our own family torn apart and to see how the children suffered. We were so bitter that we could not even agree on shared custody of the boys, so I got custody of all three of them.

Lars: Judith and I had made a few bewildered efforts to keep our crumbling family together. We even prayed to God for help. But we knew so little about God.

Judith: Our prayers left us with the feeling that God didn't listen. We are thankful that since then we have seen that God does listen to prayers.

Lars: We had no idea that we needed to put forth effort and make changes ourselves. So the divorce became a sad reality.

An Unexpected Turn for Lars

Lars: While I was living alone, events took a completely unexpected turn for me. One day I accepted two magazines from Jehovah's Witnesses. Before that time I had automatically turned the Witnesses away. But as I looked through those magazines, I saw that the Witnesses actually believe in both God and Jesus Christ. That was a big surprise. I had no idea that they were Christians.

About the same time, I moved in with a woman I had met. It turned out that she had been one of Jehovah's Witnesses. When I started asking questions, she showed me in the Bible that Jehovah is the name of God. So "Jehovah's Witnesses" means "God's Witnesses"!

The woman arranged for me to attend a public talk at an Assembly Hall of Jehovah's Witnesses. What I saw there really stimulated my interest. I visited the local Kingdom Hall to learn more, and a Bible study was established. It didn't take long for me to realize that the way I was living was wrong, so I moved away from my female acquaintance and went to live alone in my hometown. After some hes-

itation I contacted Jehovah's Witnesses there and continued my study of the Bible.

Yet, I still had some doubts. Were Jehovah's Witnesses really God's people? What about all the things I had learned as a child? Since I had been raised as a Seventh-Day Adventist, I now contacted an Adventist minister. He agreed to study with me every Wednesday, while Jehovah's Witnesses studied with me every Monday. What I wanted was a clear answer from both groups on four specific matters: the return of Christ, the resurrection, the doctrine of the Trinity, and the way the congregation should be organized. It took me only a few months to erase all doubts. In each of the four areas—and in everything else—only the beliefs of Jehovah's Witnesses were fully Bible based. As a consequence, I happily began to take part in all congregation activities and soon made a dedication to Jehovah. In May 1990, I was baptized.

Three boys lost their united family and found it again



What About Judith?

Judith: At the culmination of our marital crisis, I had started going to church again. When I heard that Lars was becoming one of Jehovah's Witnesses, I was far from pleased. Our youngest son, ten-year-old Jonas, sometimes visited his father, but I forbade Lars to take Jonas to any meetings of the Witnesses. Lars appealed to the authorities, but they were on my side.

I had met another man. Also, I had become more involved in politics and all kinds of community work. So if anyone had talked about a possible reunion of our family at that time, it would have seemed impossible.

In search of ammunition against Jehovah's Witnesses, I went to the minister of the local parish, who admitted straight away that he knew nothing about the Witnesses and had no literature about them. All he could say was that I had better keep away from them. That, of course, did nothing to change my negative view of Jehovah's Witnesses. But then I was forced to meet them in a way I had never expected.

My brother who lives in Sweden had become one of Jehovah's Witnesses, and I was invited to his wedding at a Kingdom Hall! That experience made a drastic change in my view of the Witnesses. To my amazement they were not the dull people I had always envisioned. They were kind and happy, even showing a good sense of humor.

Meanwhile, my ex-husband, Lars, had completely changed. He was more responsible,

spent time with the children, was kind and controlled in his speech, and did not drink immoderately as he had in the past. His personality was so appealing! He was now just the kind of man I had always wanted him to be. It was such a frustrating thought that I was no longer married to him and that perhaps someday another woman would marry him!

Then I planned a subtle "attack." Once while Jonas was staying with his father, I arranged to travel up to see Jonas and Lars with two of my sisters on the pretext that the two aunts should have an opportunity to see their nephew. We met in an amusement park. While the aunts took care of the boy, Lars and I found a bench and sat down.

To my surprise, as soon as I brought up the subject of our future, Lars took a book out of his pocket. It was called *Making Your Family Life Happy*.^{*} He handed the book to me and suggested that I read the chapters on the role of the husband and the wife in a family. He made a special point of recommending that I look up the scriptures.

Then, when Lars and I got up from the bench, I wanted to take his arm, but he kindly rejected that. Lars had no intention of forming a new alliance with me without knowing my view of his new faith. That offended me somewhat, but then I realized that his attitude was quite reasonable and would be to my own benefit if he ever became my husband again.

All of this made me more curious than ever about Jehovah's Witnesses. The next day, I contacted a woman who I knew was a Witness, and we arranged for her and her husband to give me the information I wanted about their religion. They had Bible answers to all my many questions. I was able to see that what Jehovah's Witnesses teach is solidly founded on the Bible. On one point after another, I had to surrender to the truth.

During that period I resigned from the Evan-

IN OUR NEXT ISSUE

**Internet Pornography
—What Harm Can It Do?**

Spots Before Your Eyes?

Does God Change?

* Published by the Watchtower Bible and Tract Society of New York, Inc., in 1978; now out of print.

gical Lutheran Church and terminated my political activities. I even quit smoking. That was the hardest step of all. My Bible study began in August 1990, and in April 1991, I was baptized as one of Jehovah's Witnesses.

Their Second Wedding

Judith: Now we were both baptized Witnesses. Though we had gone separate ways, we had both made a study of the Bible. Thanks to its fine teachings, we were different from what we had been before. We still cared for each other, perhaps in an even deeper way than before. So there we were, free to marry again—and that is what we did. We exchanged our vows for the second time, but this time in the Kingdom Hall of Jehovah's Witnesses.

Lars: The incredible had happened—our family was united again! What happiness and joy we now felt!

Judith: The wedding was attended by our sons, many relatives, and many new and old friends. It was a marvelous experience. Among the guests were some who had known us during our previous marriage; they were pleased to see us together again and were surprised to see the genuine joy among Jehovah's Witnesses.

The Children

Lars: Since our baptism we have had the joy of seeing two of our sons make the choice to dedicate their lives to Jehovah.

Judith: Jonas has appreciated the truth from the Bible ever since he got acquainted with it as a boy when he visited his father. He was only ten when he told me that he wanted to move in with his dad because, as he explained it, "Dad follows the Bible." Jonas was baptized when he was 14. He has completed his education, and now he is a full-time minister.

Lars: Our oldest son, Martin, is now 27. The changes that he saw us make gave him a lot to think about. He left home and settled in a different part of the country. Two years ago he started studying the

Bible with the local congregation of Jehovah's Witnesses there. After only five months, he was ready to be baptized. He continues with fine plans for his future life as a Christian.

Our middle son, Thomas, is not presently one of Jehovah's Witnesses. We still love him, of course, and have a fine relationship with him. He is happy about the change that took place in our family. And we all agree that thanks to the principles we parents learned from the Bible, our family has been reunited. What a blessing it is for us that we can now frequently gather our family under one roof, with all three boys and both parents together!

Our Life Today

Lars: We are not saying that we have become perfect. But we have learned something—that *love* and *mutual respect* are key factors in a living marriage. The foundation our marriage is built on now is very different from what it was before. Now both of us have accepted an authority higher than ourselves, for we both recognize that we are living for Jehovah. Judith and I feel truly united and look to the future with confidence.

Judith: I guess we are living proof that Jehovah is the best marriage and family counselor there is.

*Lars and Judith today,
reunited by following Bible principles*



ANACONDAS

ARE THEY SHEDDING SOME SECRETS?

BY AN AWAKE! STAFF WRITER

I DON'T know about you, but big snakes fascinate me in a way that few other animals do. And if we're talking about big snakes, we're talking about anacondas, members of the animal family Boidae. Curiously, though, despite their huge proportions, little has been known about their behavior—that is, until recently.

In 1992, biologist Jesús A. Rivas and researchers of the New York-based Wildlife Conservation Society (WCS) began to study these giants for the first time ever in the wild.* When I read that this six-year-long field study, which was carried out in a



swampy region of Venezuela, had revealed some new facts, I wondered what had been learned. Today I will try to find out.

About Names and Species

On a sunny afternoon, I leave my Brooklyn office and head for the WCS headquarters, located in New York City's Bronx Zoo. I had already done enough research to know some facts about anacondas.

Strangely, the name anaconda may have originated far from the animal's South American home. Some say that it comes from the Tamil words *anai*, meaning "elephant," and *kolra*, meaning "killer." Others think it comes from the Sinhala word

henakandayā (*hena*, meaning "lightning," and *kanda*, meaning "stem"). Likely the Sinhala words—originally used for pythons in Sri Lanka—were brought from Asia to South America by Portuguese traders.

Speaking of misnomers, even the anaconda's official name, *Eunectes murinus*, is not exactly correct.



The anaconda field study in Venezuela



Eunectes means "good swimmer"—and that it is. But *murinus* stands for "mouse-colored." For a snake with an olive-green skin, this name "does not seem really suitable," notes one reference work.

There is one more thing to mention about the animal's scientific names and divisions. Literature on anacondas usually states that there are two species of anacondas. One is the subject of this article—the green anaconda, or water boa, slithering mainly in the swamps of the Amazon and Orinoco basins and in the Guianas. The other is the smaller yellow anaconda (*E. notaeus*), a denizen of Paraguay, southern Brazil, and northern Argentina.

Meet an Expert

Here I am at the Bronx Zoo. This wildlife park, covering 265 wooded acres, is home to more than 4,000 animals, including a dozen or so anacondas. Khaki-clad William Holmstrom of WCS's Department of Herpetology (the study of reptiles) is here to meet me at the zoo's entrance. Mr. Holmstrom—a 51-year-old New Yorker wearing glasses, a mustache, and a ready smile—is the collection manager of the zoo's reptile department and has participated in the field study of anacondas in Venezuela. According to him, scientists now recognize the existence of a third species of anaconda (*E. deschauenseei*), an inhabitant of northeastern Brazil and coastal French Guiana.* This afternoon Mr. Holmstrom will be my expert guide.

It doesn't take long to sense that my guide loves snakes the way others love poodles or parakeets. He tells me that from the time he was a child, his parents' home housed salamanders, frogs, and the like. "Father liked them. Mother tolerated them." Needless to say, Mr. Holmstrom took after his father.

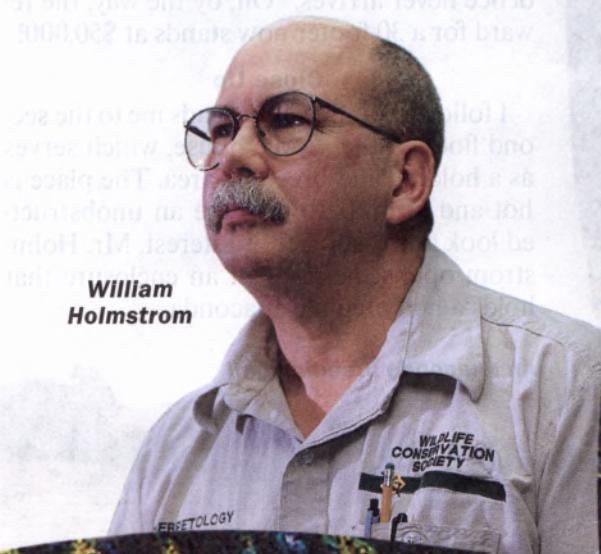
* *Journal of Herpetology*, published by the Society for the Study of Amphibians and Reptiles, No. 4, 1997, pages 607-9.

Dazzling Dimensions and Drastic Differences

Inside the 100-year-old reptile house, the two of us stop in front of an enclosure that houses an anaconda. Although I am looking at an animal that I anticipated seeing, I still can't suppress my amazement. I marvel at its sheer size and bizarre proportions. Its blunt-nosed head, bigger than a man's hand, is dwarfed by the bulky body attached to it. My guide tells me that this striking reptile is a 16-foot-long female weighing some 180 pounds. Although her body is nearly as thick as a telephone pole, I learn that she is merely a "little leaguer" in comparison with the world record holder—a roly-poly female anaconda caught in 1960 that, it was estimated, weighed nearly 500 pounds!

No male anaconda can even dream of attaining to such dazzling dimensions. Although herpetologists knew that male anacondas are smaller than females, the field study found that males are so much smaller that they look like miniature versions of females. In fact, the study showed that females are, on an average, nearly five times bigger than males. That radical difference in size between the sexes can be misleading, as biologist Jesús Rivas discovered. He used to

**William
Holmstrom**



keep a baby anaconda as a pet but always wondered why the little fellow kept biting him. Only during the field study did it dawn on him that he had been petting a full-grown and irritated male!

Wanted!—Reward Waiting

Although an anaconda's bulk is its star quality, its length is equally impressive. Granted, anacondas are not as gargantuan as Hollywood depicts them—one movie featured a 40-foot-long anaconda—but their maximum length of 30 feet or so is breathtaking enough to contemplate.

Anacondas of that size are few and far between. The largest females caught during the study were 200-pounders measuring some 17 feet. In fact, larger anacondas are so hard to find that a reward of \$1,000, offered some 90 years ago by the New York Zoological Society (the forerunner of WCS), for any live snake over 30 feet long has gone uncollected until this day. "We get two or three calls a year from people in South America who claim the reward," says Mr. Holmstrom, "but when we ask them to send us proof of their catch in order to justify our going down there to check it out, the evidence never arrives." Oh, by the way, the reward for a 30-footer now stands at \$50,000!

Close Up

I follow my guide as he leads me to the second floor of the reptile house, which serves as a holding and breeding area. The place is hot and humid. To give me an unobstructed look at my subject of interest, Mr. Holmstrom opens the door of an enclosure that holds a hefty female anaconda.

An anaconda breeding ball

At this point, there are some eight feet—and nothing else—between us and the animal. Then, the anaconda's head rises slowly and moves steadily in our direction. By now only a distance of three feet remains between the anaconda's head and ours.

"We'd better back off," says Mr. Holmstrom matter-of-factly, "she may be looking for food." I readily agree. He shuts the door of the enclosure, and the anaconda's head moves back until it gradually comes to rest near the center of its coiled body.

If you manage to ignore the anaconda's malevolent-looking glare and take a good look at its red-striped head, you will see that it has remarkable features. The anaconda's eyes and nostrils, for instance, form the highest points on its head. This allows the snake to submerge its body and head and leave its eyes and nostrils just above the water surface—much the way alligators do. That explains how the snake approaches prey while remaining camouflaged.

Tight Coils and Loose Jaws

The anaconda is not poisonous. It kills by wrapping its coils tightly around its prey. It does not crush its prey, but each time the victim exhales, the snake tightens its coils until the helpless victim suffocates. Almost anything—from ducks to deer—is considered fair game. However, reliable reports of people being eaten by anacondas are rare.

Since snakes cannot chew or tear their food, the anaconda has no choice but to swallow its dead prey whole—even if the prey is considerably bulkier than the snake



itself. In fact, if you could tackle food the way an anaconda does, you could wrap your lips around a coconut and gulp it down whole as easily as if it were a peanut. How does the anaconda do it?

"It walks its head over the prey," says Mr. Holmstrom. He explains that the anaconda's jaws are loosely attached to its head. Before setting its teeth into a bulky victim, its lower jaw can drop down and spread out. Then the anaconda pushes one side of its lower jaw forward, hooks its backward-facing teeth into the prey, and pulls that side of the jaw and the prey back into its mouth. Next, it repeats the same steps with the other half of its lower jaw. To some extent the upper jaw can do the same. With this alternating forward movement, the animal's jaw seems indeed to be walking over the prey. Once the prey has been swallowed, which may take several hours, the snake yawns a few times, and the various parts of its flexible head fall back into place.

What prevents the anaconda from choking? The presence of an extendable windpipe located in the floor of its mouth. While working its food inward, the anaconda pushes its windpipe outward to the front of its mouth. That way, the snorkellike windpipe gives the anaconda access to air while eating.

Who Is Who?

My guide now removes the lid from a terrarium, and we look down at two young anacondas. Their identical looks make me wonder how the researchers could tell the difference between the hundreds of wild anacondas they studied during their Venezuelan project.

Mr. Holmstrom explains that they tried to solve the identification problem by making tiny branding irons out of paper clips. They heated the "irons" and branded small numbers on the anacondas' heads. The method worked well until the snakes shed their skin

—and their numbers! The researchers noticed, though, that each anaconda already carries its own identification mark. Each snake has a pattern of black blotches on the yellow underside of its tail—as unique to each snake as a fingerprint is to a human. "All we needed to do was to diagram the pattern found on a stretch of skin 15 scales in length, and we had enough variations to tell apart the 800 snakes that we studied."

The Fastest, the Fittest, or the Strongest?

As we wrap up the interview in Mr. Holmstrom's office, he shows me a picture he took in Venezuela of male anacondas all coiled around one another. It is a spellbinding sight. He explains that this knot of tangled anaconda bodies forms a so-called breeding ball. (See photo on page 26.) "Somewhere inside this ball is a female anaconda. One time we found a female with 13 males coiled around her—that was a record."

Are the males fighting? Well, it's more like a slow-motion wrestling match. Each of the male contenders tries to squeeze the others out and maneuver himself into a mating position with the female. The match may last for as long as two to four weeks. Who wins? The fastest (the male that finds the female first), the fittest (the male that produces the most sperm), or the strongest (the male that outwrestles the competition)? Researchers hope to find the answer soon.

At the end of the afternoon, I thank my guide for his captivating tour. As I travel back to my office, I reflect on what I've learned. Granted, I still don't share the sentiments of biologist Jesús Rivas, that "anacondas are fun," but I admit that anacondas definitely grabbed my attention. As researchers continue to trail anacondas in the wild, it will be interesting to learn whether these giant snakes will be inclined to shed more of their fascinating secrets.

WATCHING THE WORLD

Children and Religious Services

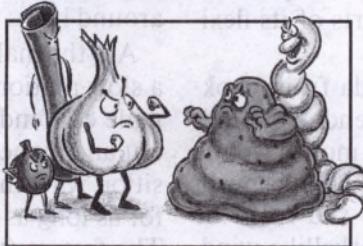
"Are children going to religious services?" asks a recent edition of the publication *Canadian Social Trends*. It answers that according to a Statistics Canada study, "over one-third, 36%, of Canada's children under 12 years of age attended religious services at least once a month, and the majority were weekly participants. A further 22% attended less frequently, but did go at least once during the year." However, the article pointed out that "religious affiliation accounted for the largest differences in children's regular participation in religious services. . . . Children in what many observers consider the mainline faith communities, such as Anglican and United Church, reported the lowest weekly attendance rates (18%)." Roman Catholic children did a bit better, with 22 percent attending weekly. While 44 percent of Muslim children attended Islamic religious services each week, "they also recorded the highest rate of nonattendance (39%) during the year preceding the survey."

Baby Walker Warning

Using baby walkers can affect the physical and intellectual development of infants, reports the *Independent* newspaper of London. Researchers at the State University of New York discovered that baby walkers with a large front tray restrict infants' view of their legs and prevent them from reaching out to touch things

around them. Babies using walkers were observed to sit upright, crawl, and walk more than five weeks later than those who had never used a baby walker. Additionally, investigation revealed that every year 50 percent of infants using baby walkers are injured by accidents such as falling down stairs or into fires or just toppling over. Dr. Denise Kendrick, of Britain's Nottingham University Medical School, states: "Baby walkers are unsafe. They seem to fulfil the needs of parents by keeping their children occupied rather than offering any benefit for the child."

Spices Fight Bacteria



The world's worst food poisoning outbreak occurred in Britain in 1996, killing 18 people. The culprit was *E. coli* O157 bacteria in contaminated meat. Recently, researchers found that adding cinnamon to unpasteurized apple juice killed 99.5 percent of the bacteria within three days, according to *The Independent* of London. On another occasion, the scientists added spices to raw beef and to sausage and found that cinnamon, cloves, and garlic were the most effective in killing *E. coli* O157. Researchers think that these spices could be effec-

tive in fighting other bacteria, including salmonella and campylobacter.

British Personal Debt

The British owe \$170 billion through personal loans, credit cards, and installment purchases and pay \$5.5 billion in interest every year, according to data published by People's Bank and reported in *The Times* of London. More than a third of the population have some form of unsecured debt, an average of \$10,400 per person. Credit card spending in Britain doubled over a period of three years, reaching \$115 billion in 1998. The survey also found that only 13 percent worry that their debts could get out of control. And 1 in 5 admitted to borrowing "in order to maintain their lifestyle," says People's Bank.

Against Her Will

Of the 304 young women surveyed in a study reported on by the German magazine *Psychologie Heute*, nearly one quarter said that they had been pressured into some form of sexual activity against their will. Further, the report notes that more than a quarter of the women reported that men had tried to use drugs and alcohol to induce them to have involuntary intercourse. It adds: "Taking into account the attempts of young men to erode female resistance by means of psychological pressure, drugs, or alcohol, the odds in favor of a young woman between 17 and 20 being forced into sex against her will climb to well over 50 percent."

World's First Dark-Sky Park

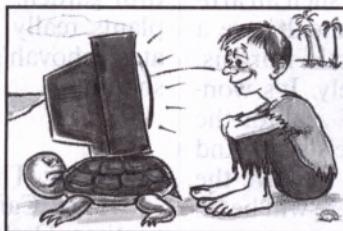
"Hidden by the glare of city lights, cloaked in a haze of air pollution, is a sight many never see now—the velvet beauty of the heavens at night," says *The Globe and Mail* of Canada. Astronomy writer Terence Dickinson laments: "It's possible for people to grow up, even to adulthood, without ever having seen the beauty of the night sky." For instance, he notes, after an earthquake knocked out power in parts of California a few years ago, some residents phoned the police to tell "about the strange appearance of stars and a misty band" in the sky. To offer Canadian stargazers views of the night sky that are unobstructed and nearly free of light pollution, a 4,900-acre tract of Crown land in the Muskoka Lakes district north of Toronto has been designated as a "dark-sky preserve." Called the Torrance Barrens Conservation Reserve, it is believed to be the first dark-sky park in the world.

Dads and Daughters

A recent Health Canada study based on surveys of 2,500 teenagers reveals a communication gap between fathers and their children, especially daughters, reports the *Globe and Mail* newspaper of Canada. Only 33 percent of girls ages 15 to 16 find it "easy or very easy to talk to their fathers about things that really bother them," compared with 51 percent of boys. Still, "girls tend to value their fathers highly and need their support," says the report. Pro-

fessor Alan King of Queen's University acknowledges that "it's difficult for fathers to talk to their kids, especially during those years of turmoil in early adolescence," when many dads ignore sexual issues and risky behavior. But he urges fathers to meet the challenge, especially since many mothers now find less time than before to spend with their children.

'Not Without a TV!'



What would you take along if you had to spend some time on a lonely island? This question was put to 2,000 youths in Germany. For the majority, the most important items would be TV sets and radios, together with CDs and cassette recordings, reports the newspaper *Westfälische Rundschau*. Food and beverages came in second, while family members and friends were in third place. One 13-year-old explained his preference: "I couldn't cope without a TV." Only about a third of those questioned said that they would include useful tools such as knives, hoes, and saws. A mere 0.3 percent mentioned taking a Bible. The youngest participant, a seven-year-old girl, said: "I would only take along my mom. When she's there, nothing can go wrong."

Super Sumo Wrestlers

Sumo wrestlers, world renowned for their great girth, are becoming too heavy for their own legs, say sports physiologists in Japan. *New Scientist* magazine reports that the incidence of injuries in the two top sumo categories doubled during the past five years, prompting a panel of physiologists to compare the body fat and leg strength of 50 wrestlers. "A quarter of them didn't have strong enough leg muscles to support their bulk properly," states the report. The top sumo wrestlers' average weight rose from 280 pounds in 1974 to 340 pounds in 1999. "It's partly related to the increase in the average size of the Japanese in general," says sumo commentator Doreen Simmonds. But greater weight does not necessarily improve performance. "The ideal sumo shape is pear-shaped," notes Simmonds. "Low hips, massive thighs and oak-like calves."

Children at Risk

Angola, Sierra Leone, and Afghanistan are the world's most dangerous places for children, and 'chances of a child surviving until the age of 18 are slim,' says a report by the United Nations Children's Fund (UNICEF). Wars, persistent poverty, and the spread of HIV and AIDS are putting the lives of children more at risk than they were a decade ago. Using a "child risk measure" with a scale of 1 to 100, UNICEF calculates a risk factor of 96 for Angola, 95 for Sierra Leone, and 94 for Afghanistan. By contrast, the average risk factor for children in Europe is 6, reports *The Times* of London.

FROM OUR READERS

Cystic Fibrosis I want to express my profound gratitude for the article "Living With Cystic Fibrosis." (October 22, 1999) My husband and I are about the same age as Jimmy Garatziotis and his wife, and it is very encouraging to see young people who have such a strong faith in spite of serious problems.

S. D., Italy

For years I've been waiting for such an article to come out. My husband and I have a six-year-old daughter with cystic fibrosis. So I read the article immediately. It's wonderful to see Jimmy Garatziotis' zeal for the preaching work, even though he's sick. And it's heartwarming to know that we have the hope of a new world in which there will be no more sickness.

H. O., United States

Jimmy's example proves that even when we have very little in terms of health, we can do a lot to praise Jehovah.

P. C., Brazil

Drugs Thank you for publishing the series "Are Drugs Taking Over the World?" (November 8, 1999) I used to use drugs—cocaine, marijuana, hashish. I also abused alcohol and smoked more than 40 cigarettes a day. Kicking these habits was very hard, but God gave me the strength. Nine years have passed since I quit, and I am grateful that I was able to get clear of this world's mire without contracting a serious illness or ending up in jail. Because I know the physical, emotional, and economic hardship caused by drug abuse, I hope that articles like these will touch the hearts of youngsters.

G. M., Italy

I used the series in a school essay, for which I received the highest possible grade and the compliments of my teacher. I am always

happy to read *Awake!*, especially articles dealing with current issues. It helps me to be realistic about life.

I. M., Italy

Palm Gardens The article "A Visit to an Exotic Garden" (November 8, 1999) was one of the most charming articles I've enjoyed recently. I could just imagine myself in Paradise, carefully planning such a beautiful garden. The love this man has for his plants really touched me. How he appreciates Jehovah's beautiful creation, as we all should!

L. C., Canada

Outgoing The article "Young People Ask . . . How Can I Be More Outgoing?" (November 22, 1999) moved me very much. I am 16 years old and find it hard to communicate with others, especially at Christian meetings. Thank you for thinking about youths like me who have this problem. I will try to put into practice the good advice that you gave in this article.

I. A., France

Singing Birds Thank you for the article "Delightful Duet Singers." (December 8, 1999) I could just imagine hearing these birds perform beautiful music on a tree limb! I daily thank Jehovah for creating animals that entertain us.

Y. S., Japan

Diabetes As part of my postgraduate course, I was assigned to conduct a seminar on diabetes mellitus. The simple and straightforward explanation published in the article "Your Daughter Has Diabetes!" (September 22, 1999) was very helpful. Sonya Herd's story made me realize just how much a patient needs clear information.

T. K., Brazil

Using Television Carefully

TELEVISION acts as "the main storyteller, baby-sitter and molder of public opinion," notes *Not in the Public Interest—Local TV News in America*, a report compiled by a media-watch group in the United States. "TV is all around us . . . Like secondhand smoke, it's in the air." And just as inhaling secondhand smoke is harmful, so absorbing hours and hours of TV programs indiscriminately selected has a damaging effect—especially on children.

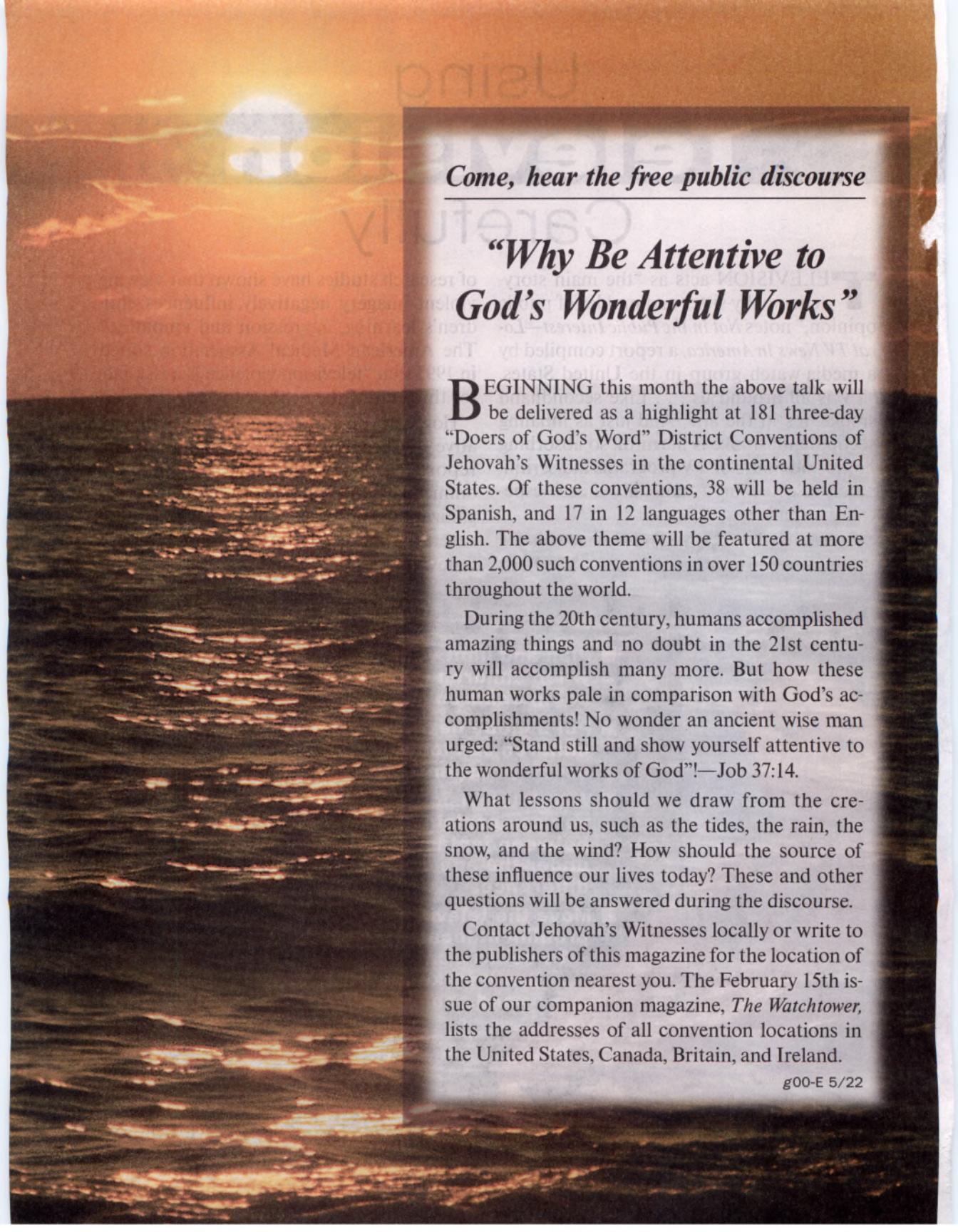
Speaking about crime and violence on TV, the same report notes that "many hundreds

of research studies have shown that viewing violent imagery negatively influences children's learning, aggression and empathy." The American Medical Association stated in 1992 that "television violence is a risk factor threatening the health of young people."

How can you control the influence of negative TV programs on your children? The report lists some tips, adapted from recommendations of several public health organizations, on how to use television more carefully. Some of those tips include the following.



- Plan and limit your TV viewing. Set limits on when children can watch. Do not put a TV set in children's rooms.
- Put a globe next to the TV so that the children can look up the places they see in programs.
- Watch television with your children so that you can explain such things as the difference between fantasy and reality. Many children under the age of ten cannot always tell the difference.
- Move the television set away from a prominent location in your home. Place the TV set in a cabinet, behind closed doors. It will make it a little harder to turn it on and channel surf.



Come, hear the free public discourse

“Why Be Attentive to God’s Wonderful Works”

BEGINNING this month the above talk will be delivered as a highlight at 181 three-day “Doers of God’s Word” District Conventions of Jehovah’s Witnesses in the continental United States. Of these conventions, 38 will be held in Spanish, and 17 in 12 languages other than English. The above theme will be featured at more than 2,000 such conventions in over 150 countries throughout the world.

During the 20th century, humans accomplished amazing things and no doubt in the 21st century will accomplish many more. But how these human works pale in comparison with God’s accomplishments! No wonder an ancient wise man urged: “Stand still and show yourself attentive to the wonderful works of God!”—Job 37:14.

What lessons should we draw from the creations around us, such as the tides, the rain, the snow, and the wind? How should the source of these influence our lives today? These and other questions will be answered during the discourse.

Contact Jehovah’s Witnesses locally or write to the publishers of this magazine for the location of the convention nearest you. The February 15th issue of our companion magazine, *The Watchtower*, lists the addresses of all convention locations in the United States, Canada, Britain, and Ireland.