

# THE BOOK OF AMAZING FACTS

VOLUME 2



COMPILED BY DOUG BATCHELOR

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THE BOOK OF  
**AMAZING**  
**FACTS** **VOLUME 2**

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Roseville, CA

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**Contents**

**Foreword**

**Amazing Animals**

**Amazing Places**

**Bizarre Bible Facts**

**Fascinating Science**

**Incredible Biology**

**Interesting People**

**Mechanical Marvels**

**The Phenomenal Human Body**

**U. S. History and Culture**

**World History and Culture**

## Foreword

I continue to be a curious person. All my life I have sought to add to my knowledge. That journey led me to the Bible and the truths contained inside. Along the way, I have also come across little bits of knowledge about the amazing world around us.

Did you know that the attention span of a goldfish is about three seconds? Mine is a bit more, but I still need to write these astonishing items and stories down. This book is the second volume of these amazing facts that I've compiled. If you enjoyed the *Book of Amazing Facts, Volume 1*—and in speaking with many of you or reading the numerous emails and letters we've received you have—then you will enjoy *Volume 2*.

I have found the use of the information in these volumes as a way to better share and teach the gospel, just as Jesus used man's natural curiosity as a tool for instruction. Whether you're an educator, pastor, a lay evangelist, or a dedicated Bible worker giving studies one at a time, you can illustrate the principles of God's Word with these intriguing and sometimes obscure facts.

You may recognize some of the information here. We use these facts during the *Bible Answers Live* radio program and on the pages of *Inside Report*. As always, if you happen to spot an inaccuracy along the way, write to let us know. We'll make appropriate corrections in future editions. In many cases, the accuracy of these facts is simply dependant on the faithfulness of our sources.

So here are just a few facts about God's amazing planet and the incredible people, places, and things that call it home.

**Doug Batchelor**



## **Contents**

**Loyal Love Birds ● A Little Flap ● A Little More on Hummingbirds ● Sleepy Animals ● Beetle Bombers ● Marine Friends ● Jellyfish ● Harriet the Tortoise ● Longwinded Sprinter ● Carrion Picnickers ● Scaly Behemoth ● Deep-Sea Weirdo ● Under Wings of Love ● Desert Wanderer ● Spiny Evolutionary Enigma ● No Ordinary Tuna ● The Fire Lizard? ● So Small, So Strong ● Tacky Feet ● As the Penguin Swims ... and Sees ● The Royal Version ● Spider Silk ● Animals That Thaw ● Pest Controller ● Brainless Regenerates ● Arachnid Scuba Divers ● Old Dakota Three-Toes ● Pond Dwellers ● That's a Big Vegetarian ● A Peculiar Bird ● Ocean Mammals ● Armored Road Warrior ● Tall & Swift ● The Living Fossil**

## **Loyal Love Birds**

The awesome migration of geese offers a number of inspiring lessons of sacrifice and teamwork. As each bird flaps its wings, it creates uplift for the bird immediately following. By flying in their favorite V formation, the entire flock adds at least 70 percent greater flying range than if each bird flew on its own. When a goose falls out of formation, it suddenly feels the drag and resistance of trying to go it alone and quickly gets back in to take advantage of the formation. When the lead goose gets tired, it rotates back into the V and another goose flies point—all the while the geese behind are honking their encouragement.

Even though they weigh between 20 to 25 pounds, geese can fly about as high as any other bird. A Himalayan mountain climber at 16,000 feet was amazed to see a flock of geese flying northward at about 27,000 feet—honking as they went. This is amazing, considering that at 7,000 feet, an average man has a hard time talking while running. Canadian geese can reach speeds of up to 60 mph during their flights, and can fly for up to 16 hours without rest. These migratory wonders will often fly up to 3,000 miles to their destination.

For birds, geese are very loyal creatures. When a goose gets sick or is

wounded by gunshot and falls out of formation, two other geese follow it down to lend help and protection. Geese also mate for life (about 20 years) and stay together during all seasons. They are also excellent parents, sacrificially placing themselves between any perceived threat and their young. Pet geese even make devoted “watchdogs,” hissing and honking loudly when strangers come around. There are many accounts of a family goose laying its life down to save a child from a venomous snake or rabid dog. If only people would stand by each other like a goose.

## A Little Flap

More than 300 kinds of hummingbirds exist in the world, and they come in every color of the rainbow. The smallest is the bee hummingbird from Cuba—it’s only two inches long and weighs less than a dime. The largest is the giant hummingbird, which can reach a whopping eight inches in length.

Yet even though hummingbirds are small in size, they have enormous appetites. Hummingbirds feed often and must consume more than their body weight in food each day. In order to obtain enough nectar, they feed every 10 or 15 minutes from dawn until dusk. Although they end up consuming only four to seven calories a day, humans with the same metabolism would have to take in 155,000 calories a day! Fortunately, they also have good memories that help them remember where to find their food.

The hummingbird’s copious need for calories is due to their extremely high heart rate and metabolism. In fact, it is believed that some hummingbirds’ metabolisms are so accelerated that if you could see the world through its tiny eyes, everything else would seem to be moving in very slow motion. This makes hummingbirds amazing hunters of insects, frequently plucking mosquitoes, gnats, and fruit flies right out of the air while hovering.

Hummingbirds are not very social animals, which is why you’ll never see them flying in flocks. In fact, males and females live apart until breeding season. And after mating, the female is on her own to build the nest and raise her young. Mothers usually lay one or two very tiny eggs, about the size of a pinto bean. When babies hatch, they are very vulnerable to predators—including large insects!

Still, when it comes to flying, nobody does it better than a hummingbird. In fact, they are so good at it that most of them never walk more than two inches and can terrorize birds ten times their own size with their acrobatic skill. Like a

helicopter, it can go up, down, sideways, backwards ... even upside down! This is because most of its wing is made of hand bones, instead of arm bones like other birds.

The ruby-throated hummingbird, for example, is reported to have a wing rate of 70 beats per second—or 4,200 per minute! But did you also know that the Bible teaches that angels do not travel at the speed of sound or even at the speed of light but rather at the speed of thought?

#### ... And Did You Know?

- A goldfish's attention span is three seconds.
- Animals that lay eggs don't have belly buttons.
- Beavers can hold their breath for 45 minutes.

### A Little More on Hummingbirds

Millions of hummingbirds migrate 500 risky miles across the Gulf of Mexico each year—a trip that takes about 20 hours of constant flight! So how do they get the energy to sustain this nonstop flight? Evidently, the world's smallest birds feast on nectar constantly for about a week to store up the calories they need to fuel their trip, often doubling their body weight in the process. Likewise, as Christians, we need to start storing up the nectar of God's Word in our hearts to make our journey of faith through the coming tribulation.

### Sleepy Animals

If you don't like to sleep, a giraffe might be the perfect pet—they sleep only 1.9 hours a day. But if you prefer a lot of sleep, you might want to own a brown bat, which sleeps about 19.9 hours a day—spending nearly 83 percent of its life in dreamland!

#### ... And Did You Know?

- Slugs have four noses.



- A camel has three eyelids.
- A honeybee can fly at 15 miles per hour.
- A queen bee can lay 800 to 1500 eggs per day.
- A bee has five eyes.

## Beetle Bombers

There are more than 300,000 different species of beetles in the world, but among them, the bombardier beetle has been created with one of the most incredible defense systems in the natural world. Whenever threatened by an enemy attack, such as ants, frogs, and spiders, this spirited little beetle shoots a jet of boiling chemicals and irritating, foul-smelling gases at its attacker. This toxic spray explodes from two tail pipes on the tip of its abdomen right into the face of the unfortunate aggressor.

With some bombardier beetles, you can actually hear the explosion as a loud popping, which is a result of rapid firing. This rapid-fire action is called “pulse combustion” and jets the boiling liquid out at more than 500 pulses per second at 212 degrees F! In addition, the beetle can rotate the end of its abdomen 270 degrees in any direction, like a tiny cannon, and hit the target with great accuracy.

Scientists have learned that the fiery beetle makes its explosive by mixing together two very volatile chemicals—hydroquinone and hydrogen peroxide. In addition to these chemicals, it adds another type of chemical known as an inhibitor, which enables it to store the two unstable chemicals indefinitely without blowing itself up. Then, whenever it is approached by a predator, the clever bug squirts the stored chemicals into the two combustion tubes, while at the same moment adds yet another chemical—an anti-inhibitor. This knocks out the inhibitor, and a violent explosion scorches the poor attacker. Of course, for some reason, the beetle is not bothered by the heat and irritation that comes from its own spray.

It is preposterous to believe such a marvelous and complex mechanism could have evolved piecemeal over millions of years. This would require thousands of generations of these little beetles blowing themselves to pieces every July 4th until finally they mastered their explosive gift. Did you know the Bible promises explosive power to those who mix prayer and Bible study?

## Marine Friends

Hermit crabs are curious creatures found near the coasts of Europe and the Americas. Most are marine, but a few species, like the coconut crab, live on land and can grow up to 18 inches in length. They are sometimes called “robber crabs” because they are born armor-less and must survive by borrowing the empty shells of dead mollusks as a protective home. These comical scavengers insert their soft abdomens into the abandoned shells and drag them around for defense. Their strong abdominal appendages are especially modified for gripping the shell firmly to their body.

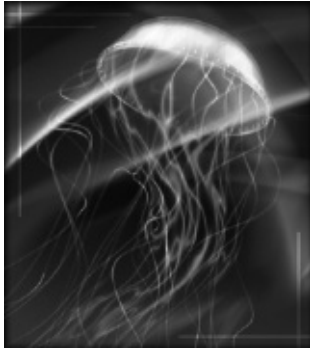
Later in life, hermit crabs are often forced to seek new and bigger shells because they have outgrown their old ones, or sometimes they might change their housing whenever they chance upon a stronger shell. But these shells don’t offer protection from all predators—their most-feared antagonist is the octopus, which can use its parrot-like beaks to pluck the hermit crabs out from their shells.

However, God has given a few species of hermit crabs an amazing defense against even these intelligent enemies—attaching sea anemones to their shells. Sea anemones are armed with an array of poisonous tentacles that they use to subdue prey. The hermit crab will gently pry the sea anemone off the surface of a rock and transfer it onto their shells.

Both hermit crabs and anemones benefit from this arrangement. The hermit crab gains the use of potent toxins as a predator deterrent, and the anemone can feed on food fragments produced when the hermit crabs eats. This mutual relationship, where both organisms benefit, is known as symbiosis.

Did you know the Bible teaches us about another symbiotic relationship between the Spirit and the Word?

## Jellyfish



Few marine animals are as mysterious and intimidating as jellyfish. These incredible creatures can be found in all the world's oceans, but a few species inhabit freshwater. They are 97 percent water and are quite see-through, hence the name. Most jellyfish live in shallow coastal waters, but a few can be found to depths of up to 12,000 feet! One of the largest jellyfish, the lion's mane, can be 6 feet across and have tentacles more than 100 feet in length!

At first glance, jellyfish appear to be one of God's simpler forms of life, and it's amazing that they are living at all. They have no heart, no blood, no gills, no bones or cartilage, and no brain. Some jellies have primitive eyes that can detect light, which is even more amazing without a brain.

Jellyfish are most closely related to corals and sea anemones, but they can move about by using special muscles to draw water into the "bell" and then push it out again for a hypnotic swim movement. Wind, waves, and currents also carry them along.

Most jellies are silent predators that kill and eat other living creatures. Usually an unsuspecting fish will swim into the near-invisible tentacles, which are loaded with millions of stinging cells. These complex cells, called nematocysts, shoot out like tiny poison darts into their prey. When the fish contacts the stinging cells, paralyzing venom is immediately injected into it. Then the jelly can eat its catch at its leisure through its mouth on the underside. The painful sting of jellyfish also can be deadly in some species. The sea wasp, or marine stinger, is rated as the most deadly venomous creature in the world! In the last century, this feared jellyfish is thought to have killed more than 70 people in Australia alone. In fact, one has enough venom to kill 60 people!

Despite their stinging cells, animals such as ocean sunfish and leatherback turtles feed on jellyfish, and most jellyfish are actually harmless to humans. In fact, it's believed that some of the painful chemicals they produce may provide

treatments for cancer, arthritis, and heart disease.

## Harriet the Tortoise

In 1835 English naturalist Charles Darwin collected three young tortoises, each about five years old, from Santa Cruz Island in the Galapagos. Darwin noted they were only about as big as dinner plates when he brought them onto the *HMS Beagle* back to England with him. He named the three subjects of scientific research Tom, Dick, and Harry.

But the young tortoises didn't fare well in cold, damp England. So in 1842, one of Darwin's colleagues took Tom, Dick, and Harry to Australia aboard a whaling ship and donated the still youthful 12-year-old tortoises to Brisbane Botanical Gardens. As time went by, Tom and Dick died from unknown causes. But wanting to preserve their tortoise attractions for the next 100 years, Harry's Brisbane caretakers tried in vain to mate him with female Galapagos land tortoises.

While in the Gardens, the poor Harry had to put up with people riding him and leaving scars on his shell where they engraved their names. Soldiers returning home from various wars even painted his shell a couple of times.

Then in 1952, Harry was moved to a sanctuary on Australia's Gold Coast, where, it was finally discovered that he was in fact a Harriet! Harriet made her final move in 1988 to the Australia Zoo, where she has been ever since. She loves to eat hibiscus flowers, along with zucchini, squash, beans, and parsley. At 330 pounds, Harriet spends much of the day snoozing in her pond. Now at 173 years of age, Harriet the giant Galapagos land tortoise is the oldest known living creature on earth. Zoo officials expect Harriet may still be going strong for at least another couple of decades.

One reason Harriet has survived is because God provides a tortoise with a natural armor in its shell. But did you also know God has provided an armor for Christians to preserve us for everlasting life?

### ... And Did You Know?

- Mosquitoes are attracted to people who have recently eaten a banana.
- Flamingos turn pink from eating shrimp.
- Emus and kangaroos cannot walk backwards.

- Cats have over 100 vocal cords.

## Longwinded Sprinter

No doubt you've heard the American folk song that goes: "Oh give me a home where the buffalo roam, and the deer and the antelope play." Of course, North America doesn't have any antelope, but it does have the pronghorn, or the "American goat-antelope." Not really a goat, deer, or antelope, it's the only member of its species in the world.

One feature that makes the pronghorn unique is its horns. Animals that have horns like cows do not shed them, nor do they fork or branch as with deer and elk antlers. But pronghorns have horns made something like a rhino's, and they are the only animals in the world who have horns with a branch or prong, hence the name. In addition, they are the only animals that shed and grow back their horns annually. The pronghorn once covered the Midwest in greater numbers than the bison, perhaps as many as 100 million. But because of hunting and disease, by the 1920s that number was decimated to about 30,000. Gradually, programs set in place to protect the pronghorn raised that number to one million.

If you ever see a pronghorn on the prairie, you can be sure he saw you first. Their exceptional eyes can pick up any movement up to three miles away, and their eyesight is complemented by excellent hearing and a sense of smell that makes it very hard for a coyote to sneak up on them.

But the pronghorn's greatest defense is speed. It is arguably the fastest land mammal in the world, sprinting 65 mph and running at a sustained speed of 35 mph over rough terrain for miles! The well-known cheetah can sprint at 70 mph, but only for a few seconds as it quickly tires. No other land mammal can keep up with the pronghorn over long distances. And when a herd runs, it does so in perfect unison and in a very tight, oval-shaped formation, much like a flock of birds.

One of the strangest behaviors of these creatures is how they relate to a basic wire fence. Even though they can easily jump six or eight feet high, whenever a pronghorn encounters a fence, it will usually try to crawl under it! They don't seem to know their own ability.

## Carrion Picnickers

Long perceived as the most abominable creature because of its repulsive feeding habits, the vulture is now beginning to get a better reputation for “cleaning up” dead animals from our forests, fields, and roads. In fact, the Latin name for the turkey vulture is *Cathartes aura*, which means “cleansing wind.” It’s true they eat carrion, of course, but did you know that 50 percent of their diet is vegetarian? On the other hand, the bearded vulture of the Himalayas eats primarily bones, swallowing some as long as 10 inches!

The vulture does its best to keep itself clean, spending two to three hours a day preening itself. They even bathe in water whenever they can—submersing, shaking, and scrubbing for half an hour. Then they walk up on the bank and hold their wings out to the sun to dry.

Vultures can fly up to 200 miles a day, but they are also homebodies. Some families of vultures have been known to use the same roost for 100 years or more. The vulture had also been classified as a bird of prey, along with hawks, owls, and eagles. But in 1994, due to DNA analysis and other studies on anatomy, physiology, and behavior, the vulture has been reclassified and placed in the stork family.

The largest flying bird on earth is a vulture, the Andean condor, with a wingspread of up to 12 feet, but the turkey vulture is probably the most graceful soaring bird in the world—reaching heights of 20,000 feet. Turkey vultures also have an extraordinary sense of smell, possessing the largest olfactory system of all birds. They have been known to smell carrion from more than a mile away.

Most American vultures are voiceless, but they have very keen eyesight. It is believed they are able to spot a three-foot carcass from four miles away on the open plains. And when they find it, they will circle above it to notify their friends so they can enjoy their “picnic” together. In Matthew 24, Jesus says, “Wherever the carcass is, there the vultures will be gathered together.”

## Scaly Behemoth



Among the largest and longest living reptiles on earth are crocodiles. Amazingly, much like trees, they have growth rings, which can be found in their scales. By counting these rings, zoologists can tell their ages, which can reach 70 to 100 years old. Although female crocodiles rarely grow larger than 10 feet, males can weigh more than 2,000 pounds and measure over 20 feet in length.

Like all reptiles, crocs are cold-blooded animals and must lie in the sun to get warm or laze in the water to cool down. But incredibly, they can also shut down or speed up blood flow to regulate their body temperature. Saltwater crocodiles actually live in both salt and fresh water and can swim for miles, staying underwater for up to 4 hours. They can even run very quickly on land for short distances.

A full-grown crocodile has a brain about the size as a walnut, but despite this, they seem to be fairly intelligent, learning quickly how to find prey. When they catch supper, very powerful muscles snap the jaw closed—and that's about it, as their jaws can't move from side to side and they can't chew. In addition, a crocodile can't move its tongue, but its digestive juices are so strong that it can digest a steel nail. Still, crocodiles can live for months without eating because they don't use much energy.

Females build a big compost nest to lay their eggs, up to 80 at a time! Amazingly, a crocodile's gender is determined by how deeply the eggs are buried in the nest and the temperature. Unlike most reptiles, a female croc will defend its nest to the death from any predators. When the mother hears the babies hatching, she runs over to dig them out of the nest and then carries her babies safely to the water in her mouth.

Crocs also have very good vision. They have three eyelids: two leathery protective eyelids and one clear or translucent one for underwater excursions. They also have very good vision and have the ability to see almost 180 degrees. But in spite of this, they can't see anything below their nose. Like the crocodile, some Christians are blind to obvious truth right under their noses.

## **Deep-Sea Weirdo**

One of God's strangest creations is the grotesque-looking deep-sea anglerfish. They make their homes throughout the oceans of the world, living more than a mile deep where pressure is more than 2,000 pounds per square

inch. Its round body resembles a basketball, and indeed, it looks like it could easily swallow one. It has the largest mouth compared to its body size of any other creature in the sea. They also have a stomach that is greatly distensible, enabling them to swallow prey larger than itself. The stomach of one even contained a lantern fish nearly twice its size!

In addition, its mammoth mouth is filled with savage, fang-like teeth that have earned it a second name: common black devil. Despite its ferocious appearance though, the anglerfish reaches a maximum length of only about five inches. And sometimes you can't even see it. In the dark gloom of the deep sea, the angler's blackish skin render them nearly invisible to their prey, by absorbing any bluish light.

Its name comes from the long, modified dorsal spine that's tipped with a light producing organ known as a photophore. Like many other deepwater fish, the angler uses this organ as a lure to attract its prey. It will flash its light on and off while wiggling it back and forth like a fishing pole. When the prey fish gets close enough, the angler snaps it up with its powerful jaws.

Only female anglers have the lure, and the small males survive in a different way. The male is about the size of a finger and looks like a black jellybean with fins. He has small hook teeth that it uses to bite and attach itself to the female. Once attached, its blood vessels join with that of the female and it will spend the rest of its life joined to her like a parasite, getting all of its nourishment from her body. He drinks her blood in return for fertilizing her eggs. The flesh of the two fish eventually fuses and they remain permanently connected "till death do they part." This adds a new meaning to the Scripture, "And they two shall be one flesh."

## Under Wings of Love

After a forest fire in Yellowstone Park, a *National Geographic* photographer joined some forest rangers on a trek up a mountain to assess the inferno's damage. As they hiked through the burnt forest, the photographer found a scorched bird literally petrified in ashes, perched statuesquely on the ground at the base of a tree. Somewhat curious by the eerie sight, he gently struck at the bird with his boot. When he did, three tiny chicks scurried out from under their dead mother's wings.

The loving mother, keenly aware of impending disaster, had led her offspring to the base of the tree and had gathered them under her wings,



instinctively knowing that the toxic smoke would rise. She could have flown to safety but refused to abandon her babies. When the blaze arrived and the heat began to scorch her small body, the mother remained steadfast. Because she had been willing to die, those under the cover of her wings lived. The Bible teaches, “He will cover you with his feathers, and under his wings you will find refuge” (Psalm 91:4).

Sometimes our Father in heaven uses the symbol of a mother to portray His love, as in Matthew 23:37: “O Jerusalem, Jerusalem, the one who kills the prophets and stones those who are sent to her! How often I wanted to gather your children together, as a hen gathers her chicks under her wings, but you were not willing!” Isaiah 49:15, 16, says, “Can a woman forget her nursing child, And not have compassion on the son of her womb? Surely they may forget, Yet I will not forget you. See, I have inscribed you on the palms of My hands; Your walls are continually before Me.”

#### ... And Did You Know?

- An ant’s sense of smell is stronger than a dog’s.
- It is possible to lead a cow up stairs but not down stairs.
- A cat’s lower jaw cannot move sideways.

## Desert Wanderer



Of course, most people know that camels are very well adapted to sandy desert life. Their soft feet spread out so that they won’t sink in the sand, and to protect their eyes from sand they have two thick rows of eyelashes. But more than that, they can see through a third thin eyelid even in an otherwise

blinding sandstorm. Camels can also close their nostrils against blowing sand and have extra hair inside their ears to keep sand out.

But contrary to the popular myth, a camel does not store any more water than other animals, yet it can handle extreme dehydration much better—enabling them to go for days without needing a drink. Camels have been known to safely lose body water equivalent to 40 percent of their weight, a loss that would be lethal to any other animal. To make up for previous fluid loss, camels can take in very large amounts of water at one session, drinking up to 27 gallons of water in 10 minutes.

Because of the wide swings in desert temperatures between night and day, camels have the ability to endure very large fluctuations in body temperature (from 97.7 to 107.6 degrees F). Before the Civil War, an effort was made to use camels in North America for crossing U.S. deserts, but the experiment failed: Their soft-padded feet are unsuitable for travel over much of the rocky Southwestern terrain. They also frightened horses and were generally detested by their handlers, who were accustomed to more docile mules.

In contrast, about the same time, camels were introduced to Australia, where they flourished. These wild camels are now scattered throughout the arid interior of Australia, side by side with kangaroos, and are estimated to number more than 500,000.

For centuries, camels have been called “the ship of the desert” because they look like boats floating across a sea of sand and can travel up to 100 miles in a day carrying loads weighing as much as 1,000 pounds. Keep this picture in mind when you consider Jesus’ words: “It is easier for a camel to go through the eye of a needle than for a rich man to enter the kingdom of God” (Mark 10:25).

## **Spiny Evolutionary Enigma**

One of the strangest animals in the world is the long-beaked echidna, or spiny anteater. Weighing about 20 pounds, this nocturnal beast is found mainly in the humid mountain forests on New Guinea and Indonesia. Interspersed with its brownish or black fur are sharp spines of varying length. These spines can be erected, and its arms and legs withdrawn, much like a hedgehog. At the end of its long down-curved tubular snout is a very small mouth through which its long tongue can be rapidly extruded and retracted. It has no teeth, but compensates with rows of teeth-like spikes on its tongue. The

echidna probes with its long beak in the muddy soil until it detects, by faint electrical current, a worm or other invertebrates. The tongue is then extruded and the worm is hooked by the spikes and reeled in like a fish.

Even though it is technically a mammal, the female long-beaked echidna lays shell-covered eggs that are incubated and hatched outside of the body like a reptile, but then the offspring are carried and nursed in a small pouch like a marsupial. Perhaps most remarkable of their extraordinary features is their large and complex brains and high intelligence, characteristics unexpected in the world's most reptile-like mammal. They also live an incredibly long time with one having been kept in the London Zoo for more than 30 years.

Tragically, today the long-beaked echidna is an endangered species. Some reasons for its decline appear to be loss of forest habitat to logging, mining, farming, and hunting. The people of New Guinea relish the oily meat of the echidna.

The spiny anteater is an enigma for evolutionists, because it looks like God assembled it from spare parts leftover after He created all the other animals, and stands in a class of its own. In spite of the mass of media messages, the world did not evolve over multiplied millions of years.

#### ... And Did You Know?

- Camel's milk does not curdle.
- All porcupines float in water.
- The world's termites outweigh the world's humans by 10 to 1.
- A hummingbird weighs less than a penny.
- A jellyfish is 95 percent water.

## No Ordinary Tuna

Giant bluefin are the largest living species of tuna, reaching up to 10 feet in length and weighing 1,400 pounds. A bluefin's lifespan is believed to be longer than 20 years, but only one in a million of the hatchlings survive to maturity. They are also considered by many to be among the strongest and fastest fish. Their torpedo-shaped bodies and ability to retract their pectoral fins enable them to reach up to 25 mph in short bursts. Bluefin are found in all of the

world's oceans and can migrate up to 5,000 miles of open sea in just 50 days in search of food.

Bluefin tuna is popularly served raw as sashimi or sushi in Japanese restaurants, where a plate of slices can command a bill of more than \$75. Just one of these unique animals can net from \$5,000 to \$30,000 at the dock, but in September 2000, an enormous 444-pound bluefin tuna sold at Tokyo's fish market for a record \$173,600. This was the most expensive fish ever auctioned —\$391 a pound! The poor but expensive tuna was reduced to 2,400 servings of sushi for wealthy diners at \$100 per serving!

But an even more priceless catch? Jesus told the disciples that if they followed Him, He would teach them to fish for men.

## The Fire Lizard?



Timid yet fascinating, salamanders are little animals that look like lizards but are actually amphibians more related to frogs and toads. There are about 320 species of salamanders and newts found mainly in the Northern Hemisphere, all the way from sea level to altitudes above 13,000 feet. The name “salamander” comes from a Greek word meaning “fire lizards.” Ancient peoples linked salamanders to fire because they often saw them crawl out of logs that had been thrown onto fires, leading people to believe that these animals could walk through infernos.

Most salamanders are about 4 to 6 inches long, but they range from about 1 inch to the giant Chinese salamander that grows up to 6 feet long and weighs 55 pounds! And some of these gentle creatures have long life spans. The hellbender species is capable of surviving for 25 years in their natural settings, and some fire salamanders have survived as long as 50 years in captivity.

These beasts are earless and thus deaf to airborne sound, but they can “hear” by sensing vibrations from the ground. They have relatively good vision and a keen sense of smell, but they have little or no voice production. Most adult salamanders have sack-like lungs for breathing air, but they can also use their permeable skin as a source of supplemental oxygen.

They eat mainly worms and insects that they catch with a long, sticky

tongue. But among the many unique characteristics of salamanders is their ability to shed their tails if a predator threatens them. Once released, the tail twitches about on the ground and confuses the attacker ... while the salamander slips away and later regenerates a new tail. Jesus said it is better to cut off a hand or foot than go to hell with a whole body.

## So Small, So Strong

Ants are the most numerous creatures on earth, and it's been estimated that the combined weight of all the world's ants is greater than the combined weight of all humans. Ants are admired for their ability to pull 30 times, and lift 50 times, their own weight. That would be equivalent to a human pulling a Clydesdale or lifting an elephant!

Ants know teamwork too. If necessary they will make their bodies into ladders to climb on, or rafts to float on. Ants are also among the most organized insects. Some ant species herd aphids like domestic livestock. The ants and aphids are engaged in a symbiotic relationship—on one hand, the ants actually care for the aphids and protect them from ladybugs. In exchange, the ants receive a nutritious “honeydew” excreted by the aphids. The ants tap the aphids with their antenna to let them know they would like some honeydew sap, then they carry the sap back to the nest to feed others. While tending their flock, the ants may redistribute the aphids on the host plant to prevent local overcrowding. Before winter, these ants will even carry off aphid eggs to start a new herd of aphids in the spring.

If that weren't enough, some ants are also farmers. Leaf-cutter ants from the tropical forests of Central and South America live in huge underground colonies that can contain up to 8 million ants, all ruled by a single queen. The largest workers leave the nest to forage for leaves and petals, collecting leaves by cutting them with their sharp jaws into small pieces. They then carry the pieces back home. But they don't eat the leaves; instead, these resourceful insects use them to grow their own food! Back at the nest, smaller worker ants chew the leaves into even tinier pieces to form large compost heaps. This compost grows the fungus on which they feed. Tiny gardener ants carefully tend these fungus gardens deep underground.

The Bible says, “Go to the ant, you sluggard! Consider her ways and be wise, Which, having no captain, Overseer or ruler, Provides her supplies in the summer, And gathers her food in the harvest” (Proverbs 6:6–8).

## Tacky Feet

Geckos are small, insect-eating lizards that have an almost miraculous ability to scurry up walls and stick to ceilings. Aristotle noted the amazing climbing abilities of geckos in the fourth century B.C., and scientists have been

wondering ever since how the noisy little creatures can walk up smooth surfaces or even upside down on polished glass.

It certainly isn't suction, and because they don't have any glands on their feet, geckos can't produce their own sticky glue. But researchers now think they may have solved the riddle. Their sticky ability appears to come from a weak magnetic attraction that molecules have for one another when they are brought very close together. Looking through a microscope reveals about 2 million densely packed, fine hairs, or "setae," on each of their toes. The end of each setae is further subdivided into hundreds to thousands of structures called "spatulae." These billion spatulae, which look like broccoli on the tips of the hairs, produce electrical attractions that are pressed so close to a surface they electrically glue the animal to the surface.

A team of biologists and engineers have calculated the combined adhesive force of all the tiny hairs lining the gecko's toes at 10 times greater than the maximum force needed to pull a gecko off the wall. (It is estimated that if our feet had the same "sticking power" of a gecko foot, each foot could hold about 90 pounds to a glass ceiling.) The gecko hairs have also been shown to be self-cleaning, unlike any other known adhesive. Geckos have also developed an amazing way of walking: They scamper up walls and across ceilings by rolling these hairs onto the surface and then peeling them off again, just like tape, all within a fraction of a second. Researchers believe the reptile's sticky toes could now help them develop a new dry synthetic adhesive that's better than tape and self-cleaning.

The Bible teaches that when a man finds a wife, he leaves his father and mother and cleaves unto his wife—but it appears that the glue holding many marriages together has been failing.

#### ... And Did You Know?

- If you keep a goldfish in a dark room, it will eventually turn white.
- Elephants sleep only two hours a day.
- A duck's quack doesn't echo.
- A snail breathes through its foot.

**As the Penguin Swims ... and Sees**

Penguins have an almost perfectly streamlined body profile that's ideal for chasing fish. In fact, the penguin has the most hydrodynamic body shape ever gauged. A swimming chinstrap penguin, seven inches wide, slices through water with less resistance than a quarter-sized pebble. Their sleek bodies also help them snag prey and escape predators like leopard seals and killer whales. Penguins have other features that make them highly capable fishers. Their tongues are armed with sharp, backward-facing barbs that help prevent prey from escaping.

But not only are penguins able to swim faster than a man can run, their efficient shape enables them to travel long distances. Emperor penguins, for instance, have been known to cover almost 1,000 miles on foraging trips that last up to a month, swimming more than 40 miles per day. Not bad for a bird!

Penguins are also world-class divers. In the 1970s, dive-recording devices attached to emperor penguins revealed they could dive to depths of at least 1,766 feet in search of food. That's astonishing when you consider that this is much deeper than a nuclear submarine cruises. It's a mystery how these birds survive at such depths; for instance, at 1,200 feet, penguins are being compressed by 40 times the pressure they feel at the surface!

Yet the penguin eyes appear to be their greatest miraculous marvel. Their pupils can adjust much more than a cat's, dilating from a pinhole to the size of a quarter, which gives them sharp vision in both the pitch black depths of the ocean and at the blinding bright Antarctic surface—but an even more amazing accomplishment when you consider that air and water demand very different kinds of sight. Penguins apparently make the switch smoothly by using fine eye muscles to bend and warp the lens in their eyes to correct for differences between air and water vision. Penguins can also see into the ultraviolet range of the electromagnetic spectrum.

The Bible teaches that a Christian must be able to maintain spiritual vision with their eyes on heaven while still living in the dark world below. "Where there is no vision, the people perish" (Proverbs 29:18).

## **The Royal Version**

The emperor penguin, the largest of the species, lives 35 long years. Near the end of every May, these majestic birds travel far inland to the Antarctic ice pack, sometimes walking, sometimes sliding on their bellies, for many miles.



They finally arrive at one of the most desolate places on earth, where the female lays an egg at the feet of her male companion.

He quickly covers it with a fold of his fat, feathery fur to keep it warm—and continues to do it in the middle of winter near the South Pole, with its perpetual darkness, terrible cold, and fierce windstorms! For 64 days he stands there, living on his blubber and eating nothing. At the beginning, the female helps briefly, but soon she leaves him to care for the egg, while she spends the next two plus months feeding in the ocean.

The males huddle in clusters of about 100 for protection from the frigid wind, incubating the eggs on their feet. Soon after the babies hatch, the females return. How do they find the nesting grounds across the trackless wastes of that land covered in white snow? And once there, how do they find their chick among the thousands of squawking youngsters? These are two great mysteries. But they do know that when the females return, the males have lost 20 pounds ... and it's their turn to go to the ocean and feed while the females care for the children.

Emperor penguins demonstrate some of the most patient devotion and warm love for their young of any creatures, and they do this in the coldest conditions on earth, where temperatures may drop as low as minus 85 degrees below zero! The Bible says in the last days, “because lawlessness will abound, the love of many will grow cold” (Matthew 24:12). But your love can stay warm even in a cold world!

## **Spider Silk**

One of the most amazing materials in nature is the light, flexible, yet incredibly strong compounds spiders use to catch unsuspecting insects—spider silk. Pound for pound, the threads produced by arachnids can hold more weight than the most sophisticated manufactured materials. A spider web features a tensile strength of 300,000 pounds per square inch and is both stronger and lighter than compounds based on steel. It has been suggested that if a strand of spider silk could be produced as thick as a pencil, it could stop a Boeing 747 in flight.

People have known about the impressive properties of spider silk for a long time, and some have dreamed of being able to create it in the same way ancient Chinese produced silk from silkworms. But unlike the gentle silkworm, spiders are aggressive and territorial and not easily domesticated. Up until now, all

attempts to synthesize spider silk have failed, but a new venture involving gene-splicing is showing considerable promise.

A Canadian company appears to be on the verge of manufacturing a substance similar to spider silk through a surprising method—starting with goat milk. Researchers place a spider silk gene into a milk-producing goat since there are close anatomical similarities between the silk-producing glands of spiders and the milk-producing glands of mammals. The silk genes work with amazing efficiency in goat mammary cells.

The challenge is mass breeding these transgenic goats and extracting the pure silk protein from the milk so it can be spun into fabric. If it works, the company will have its own spider silk, called “BioSteel”—which may soon be used for a variety of applications, from medical sutures to artificial tendons or ligaments. It also could be used to create lighter and stronger bulletproof vests and for even the coatings of space stations to protect them from micrometeorites.

It’s interesting to consider how many of man’s discoveries have been plagiarized from the amazing creatures God has designed. The most amazing fact is that many people still think all these wonders of nature evolved by chance!

#### ... And Did You Know?

- Cats can hear ultrasound.
- Despite its hump a camel has a straight spine.
- Mosquitoes have 47 teeth.
- Fish can drown.
- Kangaroo can jump 30 feet.

### Animals That Thaw

When humans and other mammals freeze, it results in frostbite or death. But God has given species of snakes and frogs that live in very cold climates the ability to survive being frozen! This capacity is not fully understood, but it is achieved by two mechanisms. One is called “freezing tolerance,” a rare ability

in which the body is able to survive freezing and the destructive ice formation in tissue cells followed by thawing.

The other, more common, condition is “freeze avoidance” or “super cooling.” In this process, the body contains substances like glycerol that act like a natural antifreeze and prevent ice formation in tissue cells. For instance, below frozen lakes and ponds, painted turtles can stay submerged and motionless for as long as three months—but they never actually freeze. It’s a mystery how they can survive in this state of suspended animation for so long with zero blood oxygen, for humans, by contrast, begin to suffer irreversible nerve damage if oxygen to the brain is cut off for more than four minutes.

Of course, for most cold-blooded animals—freezing temps usually mean death. But there are some amphibians that hibernate at or near the soil surface where temperatures can drop substantially below the freezing point of their body fluids. These creatures have the amazing ability to endure the freezing of water in extra-cellular body compartments. In fact, among some frogs, as much as 65 percent of their total body water may be converted to ice, enabling them to survive days or weeks of sub-zero conditions. When the spring thaw comes, the spark of life activates their muscles and they appear to return to life as if resurrected.

Being that God can design cells that survive freezing, it’s easier to believe He can order the molecules of a dead body to be reconstituted. But millions still find it difficult to believe in the resurrection.

## **Pest Controller**

Anteaters are among the strangest of God’s animal creations. The largest of the species lives in grasslands and the open tropical forests of South and Central America. Covered with stiff, straw-like hair that grows up to 10 inches long on the tail, a full-grown giant anteater weighs about 90 pounds and measures up to four feet in length (about the size of a German shepherd), not including the puffy tail that adds an additional three feet.

Giant anteaters have large, hook-like claws on each front foot, walking on the back of their wrists to protect them. These claws are used to dig for food and for self-defense against jaguars and pumas, their natural enemies. Giant anteaters have been known to kill these large cats using their powerful claws.

Anteaters have a very slow metabolism, maintaining one of the lowest body temperatures of any mammal while sleeping up to 15 hours a day. Though they

have terrible eyesight, their excellent hearing awakens them at the slightest sound.

Anteaters are, of course, insectivores—eating mostly ants and termites but also other insects as long as they don't sting. At the end of the anteater's very long nose is a very small mouth, barely big enough to pass a pencil. But they're great at catching insects with their two-foot long sticky tongue, flicking in and out up to 160 times each minute! The tongue also has backward-pointing barbs that mash the captured insects against the hard pallet. Because they are toothless, most chewing occurs in the gizzard-like stomach, aided by ingested pebbles.

Even though anteaters might eat more than 30,000 insects in a single day, they only lick up a few thousand at one feeding. They like to circulate around their territories, feeding lightly here and there, never destroying any one nest completely, allowing the termites colonies to recover, which they do rapidly. While foraging, a mother anteater carries her single offspring on her back for up to one year, a considerable length of time.

A giant anteater marks its territory with a gland on their hind end, and the odor is so strong that the locals have nicknamed it "stinker of the forest." Anteaters also have a keen sense of smell that can identify the species of ant and termite that are in the nest before they rip it open. But even though their sense of smell is 40 times more powerful than a man's, they don't seem bothered by their own stink!

Jesus said a common flaw of human nature is to see the speck in the eye of others, oblivious that we might have a log in our own eye. But is it ever appropriate for Christians to judge someone else?

#### ... And Did You Know?

- Squids can have eyes the size of volleyball.
- A cat has 32 muscles in each ear.
- A crocodile cannot stick out its tongue.
- Fish cough.

## Brainless Regenerates



Starfish are the most popular and recognizable creatures in tide pools. About 1,600 different starfish species can be found almost everywhere in the ocean, from the deep sea to the shallow reef. They range in size, but certain species can reach 26 inches across.

Starfish are unique, brainless creatures that have no front, back, head, or tail—and they can move in any direction without turning. Rather than using muscles to move their hundreds of tiny legs, starfish use a complex hydraulic system to travel around or cling to rocks. Because starfish are slow, they prey on other slow-moving or stationary creatures, and even scavenge dead ones. They will eat just about anything, which is why you don't find many in home aquariums.

These creatures also have a good sense of smell to sniff out any edible tidbits, and they can be voracious eaters, devouring up to three times their body weight in a day. (Young starfish may eat 10 times their body weight!) To eat an oyster or a clam, the starfish patiently pries the two shells apart to open a tiny gap, whereupon it performs a unique feat—it turns its stomach inside out! Everything in pops out of its mouth into the clam, to release digestive juices and absorb the resulting soup! After the meal, it inverts its stomach back into its body.

Starfish usually have five arms, but a few have less and some species have as many as 50. They are famous for their amazing ability to regenerate or re-grow a lost arm. One common Pacific starfish can cast off an arm without any part of the central body attached and that arm will slowly grow into a complete new starfish. In fact, some starfish reproduce by purposely pulling one arm off. Years ago, inexperienced pearl divers would hack up the starfish eating the oysters, not realizing they were only making more starfish.

In like manner, the Caesars once tried exterminating the church by killing Christians. But the more they persecuted, the more the church grew.

... And Did You Know?

- The bullfrog is the only animal that never sleeps.
- Elephants are capable of swimming 20 miles a day.
- Lizards communicate by doing push-ups.

## Arachnid Scuba Divers

In Europe, Asia, and parts of Africa lives a curious little spider that makes its home under water. This water spider spins a tiny web in the shape of a bell and attaches it to the stems of water weeds and plants just below the surface of a freshwater pond.

Since all spiders need to breathe air, the water spider takes its air along like a diver. On the surface, it traps tiny bubbles in the hairs of its body, then hurries home and brushes them off, releasing them under her web. The spider makes many trips to bring back air bubbles for her underwater nest. The waterproof web becomes inflated with trapped air and makes a perfect place to live, eat, and lay eggs.

When the fresh air is used up, the spider returns to the surface to breathe and collect more fresh air bubbles for her home below. Living below, and yet breathing the air from above, this little spider is constantly surrounded by water but remains perfectly dry!

John 17:15, 16 says, “I do not pray that You should take them out of the world, but that You should keep them from the evil one. They are not of the world, just as I am not of the world.”

## Old Dakota Three-Toes

Between 1883 and 1918, more than 80,000 wolves were systematically slaughtered. By the early 1920s, wolves in the lower United States were all but wiped out.

Near the end of the extermination, a lone wolf limped up to a ranch house in South Dakota—he had lost one of his toes in a trap. Wolves are social creatures, and because he had lost all his fellow wolves, he seemed to be seeking human aid. Instead of help, he was met with a raised rifle and had to flee. From that day until his death in 1925, Old Dakota Three-Toes waged a vicious one-wolf war on Harding County, South Dakota.

Measuring five-and-a-half feet and weighing over 100 pounds, Three-Toes spent his remaining years killing ranchers' stock. In one three-month period, he destroyed \$6,700 worth of sheep, cattle, and even horses. The "renegade wolf" that had watched its own species annihilated undertook seemingly wanton attacks on cattle and sheep, killing scores in a night out of what seemed sheer vengeance.

Whole communities marshaled their resources to kill this last of the Dakota wolves. However, Old Three-Toes proved to be more intelligent than the 150 professional hunters who tracked him. He led riders down ravines that became too narrow for the horses and through fields full of gopher holes where the horses could easily trip. He once hid in the body cavity of a dead horse.

The old wolf ate only his own freshly killed prey to avoid poisoned bait, and he was also especially good at springing traps. Finally, the legendary old wolf was trapped by a Federal wolfer who buried traps on a hill, then transplanted sagebrush beside them. The next day Three-Toes, curious about the freshly dug earth round the bush, stepped into two of the traps and died a few hours later. "Old Three-Toes," the last natural wolf in South Dakota, was killed in 1925. He had lived for nearly 20 years, twice as long as the average wolf, driven by vengeance.

Some people spend much of their lives driven by bitterness and anger until they self-destruct.

## **Pond Dwellers**

Fairy shrimp are amazing little crustaceans related to sea shrimp that can be found in vernal ponds, a temporary pond that usually appears in the spring. They are seldom more than an inch long and usually much smaller. They have 11 to 17 pair of leaf-like legs used to create a current for swimming, which they seem to prefer doing upside down. The current enables them to breath through their front appendages, which are called gill legs. They feed on algae, dead plants, and smaller animals caught in the current made by their appendages.

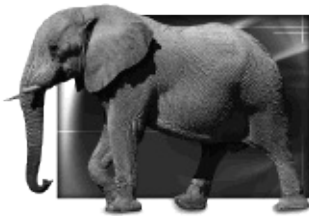
These shrimp can suddenly appear in vernal ponds by the millions one year, then completely disappear in the same pond for several following years. Females can produce eggs year round, carrying them in sacks behind their gill legs. But they also have the uncanny ability to produce different kinds of eggs throughout the year. For instance, just before a drought, fairy shrimp produce eggs that are encased in a hard-walled cyst, or case, that is so strong that the

eggs can dry up and hatch many years later. After being exposed to water, the eggs hatch out in only 30 hours. These special eggs have been subjected to boiling water and temperatures as low as -310 degree Fahrenheit, and they still remained viable. Eggs have even been hatched in a laboratory after 20 years, but it is possible these resilient little ones might last hundreds or even thousands of years and still hatch!

Recognizing how durable the eggs are, in 1962, Harold von Braunhut began to market the fairy shrimp to children as “Sea Monkeys” and has since made a fortune.

We don't know how God can preserve the essence of life in a dormant egg or seed. We also don't know how He can resurrect a dead body, but we see so many miracles of life in the natural world that we are inclined to believe He can do the supernatural.

## **That's a Big Vegetarian**



The elephant is the largest land mammal on earth. Throughout history, they have been revered, honored, and prized for their great size and strength. On the battlefield, soldiers with elephants have terrified and trampled enemies. Elephants also have been trained to carry heavy supplies through jungles and to haul huge logs from the forests where they once lived.

A full-grown African elephant can weigh more than 10,000 pounds. As vegetarians, they must consume between 300 to 500 pounds of food and drink up to 50 gallons per day. In its search for food, an elephant can travel up to 6,200 miles in one year, the longest mammal migration on record. They also never stop growing throughout their lifetime; so size is usually a good indicator of age—the larger the elephant, the older it is. They commonly live to 80 years, but some have been known to live beyond 100!

The elephant is the only animal with four knees, so they cannot run or jump. They can, however, walk very fast. A herd ambles at about 4 miles per hour, but when provoked they will charge at more than 25 mph. Soft spongy



pads on the soles of their feet absorb noise, allowing these massive beasts to move through the bush with very little commotion. They can also climb and even swim! They are capable of swimming considerable distances and, when in deep water, they hold their trunks above the water like snorkels or periscopes.

The most obvious characteristic of elephants, besides their massive size, is their trunk. An elephant's trunk is really nothing more than an elongation of the nose and upper lip, but it is the most versatile of all mammalian creations. The trunk is composed of an estimated 150,000 muscles and is employed as a nose, arm, hand, and otherwise multipurpose tool to pull branches off trees, uproot grass, pluck fruit, and to place food in their mouths. It's also used for smelling, trumpeting, drinking, greeting, or throwing dust for dust baths. Elephants are capable of pulling up to three gallons of water into their trunk to be sprayed into the mouth for drinking or onto the back for bathing. Using their trunks, elephants can feed as high in trees as giraffes, and the trunk is powerful enough to kill a lion with a single swipe—yet the finger-like lobes at the end are agile enough to pluck a feather from the ground. Baby elephants often insert their trunks into their mouths and suck on them, like a human child sucks on its thumbs.

Elephant tusks are elongated upper incisors and are the largest and heaviest teeth of any living animal. They are used for digging for roots and water, stripping the bark off trees for food, defense from predators, and fighting each other during mating season. Tusks grow continuously throughout the elephant's life, as long as 10 feet and as large as 150 pounds each. This ivory, also known as "white gold," was used at one time in the manufacture of piano keys, billiard balls, and other objects. Over the years, hunters have slaughtered thousands of these magnificent animals just for their tusks. At the turn of the 20th century, elephants numbered from five to 10 million, but widespread hunting and habitat destruction reduced their numbers to an estimated 600,000. Ivory poaching almost drove elephants into extinction.

Did you know that the Bible predicts that in the last days, real Christians will be hunted because they choose to obey God's commandments?

## **A Peculiar Bird**

One of the strangest creatures in the world is a flightless bird found only in New Zealand, called the "kiwi." The kiwi is the smallest member of the ratite family, which includes the ostrich and emus, and is unique in several respects.

For one thing, it is the only bird in the world that has its nostrils at the end of its beak, which is about one third of its body length. The kiwi literally sniffs out its food by plunging its long beak below the surface. They also have excellent hearing that can detect a worm wiggling underground.

Kiwis live as monogamous couples, with the bigger female dominating the male, who may do most of the incubating of the eggs. And the eggs are huge: The female kiwi has one of the largest egg-to-body weight ratios of any bird. The mature egg averages 20 percent of the female's body weight, compared to two percent for an ostrich! A five-pound kiwi lays an egg that weighs just over a pound, which would be like a hundred-pound woman giving birth to a 20-pound baby. And the eggs take an exceedingly long time to hatch, up to 80 days, whereas a chicken egg only takes 21 days.

The kiwi is often confused for a mammal for a few reasons. For one thing, it has wings but cannot fly. Its loose, hair-like feathers; long whiskers; and the fact it burrows in the ground all contribute to the confusion.

Some think it strange that New Zealanders like to call themselves kiwis and have made the image of this bizarre bird a national emblem on their money, stamps, and coins. Yet the Bible teaches that Christians are called to be a peculiar people, but does that mean that we are commanded to be wacky or weird?

“Now therefore, if ye will obey my voice indeed, and keep my covenant, then ye shall be a peculiar treasure unto me above all people: for all the earth is mine” (Exodus 19:5). “But ye are a chosen generation, a royal priesthood, an holy nation, a peculiar people; that ye should show forth the praises of him who hath called you out of darkness into his marvelous light” (1 Peter 2:9).

## Ocean Mammals

Dolphins are wonderful creatures that belong to a group known as cetaceans, which includes all whales, dolphins, and porpoises. More than 40 different species of dolphins and porpoise can be found in most oceans and even in some freshwater rivers. Like humans, dolphins are warm-blooded mammals that breathe air and nurse their young. They are highly intelligent and generally live up to 25 years.

Incredibly, dolphins can sleep in a semi-alert state by resting one side of their brain at a time, and if needed, they can hold their breath for eight minutes and can dive as deep as 650 feet. The bottle-nosed dolphin has 104

teeth used to seize the small fish or squid they feed on, and they often work in a team to round up their prey.

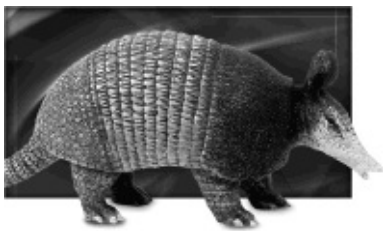
A dolphin sheds a thin outer layer of skin every two hours. This slick, rubbery skin enables them to swim at speeds up to 35 mph, which is why they keep up with speeding boats! In fact, the design flukes on a dolphin's tail are used to improve the effectiveness of submarines and boat propellers!

Dolphins almost always try to help sick or injured dolphins and on several occasions have been known to assist or rescue humans stranded in the ocean, even to the point of chasing off threatening sharks.

To find their way around, dolphins use a type of sonar. This echolocation allows them to navigate through dark or murky water without bumping into anything. They produce powerful clicking sounds that travel through water, bouncing off objects and returning to the dolphin. A whopping 1,200 clicks a second can be transmitted ahead of a dolphin, and by the pitch of the returning echo, and the time it takes to get there, the dolphin can determine the shape, size, speed, texture, and density of the object. It can even view the inside of an object, almost like an X-ray.

To communicate, dolphins use a variety of noises called vocalizations, which come from their blowholes. You could say that blowholes are the equivalent of the human nostrils. Every dolphin has its own signature whistle to distinguish itself from its companions, and most marine biologists are convinced they have a complex form of language to communicate emotions and signals. Lucky chance or incredible design?

## Armored Road Warrior



Armadillos are one of God's strangest. Like their cousins, the anteaters, armadillos have a very long, sticky tongue to slurp up bugs as quickly as possible. They are also equipped with strong claws to tear open ant nests and to dig a burrow 15 feet long in which to bear their young. The female armadillo always bears four young, which are also always the same sex—the only

mammal known to do so. Some female armadillos have been known to give birth up to two years after they were captured! These “virgin births” are a result of the female’s amazing ability to delay implantation of the fertilized egg.

Armadillos like to swim, and they are very good at it. But because their heavy shell makes them sink, they must swallow air to become buoyant. When needed, they can hold their breath for up to six minutes at a time and can go quite a distance underwater, walking along the bottom of streams and ponds like a lobster.

The popular nine-banded armadillo is between 29 to 36 inches long including the tail. And they usually weigh between 8 to 17 pounds. Armadillos make timid pets partly because they sleep an average of 18 hours a day and venture out at twilight or when it is very cloudy, because their eyes are very sensitive to light. But some still say they can be house broken and make good pets.

Generally, armadillos struggle in their coexistence with man. The greatest cause of death is automobiles. But most do not get hit by the wheels—they have a habit of jumping straight up into the air when they are frightened, which increases their mortality rate on the road.

Unfortunately, Armadillos are also ideal creatures for many types of medical research. Their low body temperature causes them to have a very weak immune system; they are used in leprosy research because they are the only animals besides humans that can get leprosy. In fact, some people have been known to contract leprosy from eating armadillos. Perhaps this is one of the reasons that the Bible says we should not eat unclean animals.

Still many people mistakenly believe that Jesus abolished the health laws.

## **Tall and Swift**

Among land animals, giraffes stand head and shoulders above the rest—towering up to 18 feet above the grasslands of Africa. Giraffes are herbivores, and their extended necks, combined with that 18-inch long tongue, allows them to reach the tasty leaves high in the tall, thorny acacia trees.

Although the giraffe’s neck is about seven feet long, it contains the same number of vertebrae as a mouse—seven; of course, each vertebrae is greatly elongated. In fact, every time a giraffe picks up its neck, it raises about 550 pounds! Its circulatory system is specially adapted for its long neck. They have

elastic blood vessels in the neck and head to handle changes in blood pressure due to head swings. This is why a giraffe's heart must weigh a whopping 24 pounds to pump the blood to such a high altitude!

Giraffes live about 25 years, but they rarely lay down; they even sleep and give birth standing up. In fact, newborn calves begin their lives by falling six feet to the ground. They are one of the few animals born with horns.

The word Giraffe means "one who walks swiftly." With each step, a giraffe travels about 15 feet. They are also fast runners that can reach speeds faster than a horse, over 35 mph. Though male giraffes will often "neck wrestle" to establish dominance, they are generally passive, non-territorial, and sociable. They live in loose, open herds grazing peacefully with zebra, wildebeest, and antelope.

A giraffe is the most vulnerable when drinking, because they must spread their front legs far apart in an awkward stance to get their heads low enough to reach the water. Fortunately, a giraffe can go without water even longer than a camel.

Julius Caesar brought the first giraffe ever seen in the West to Rome in about 46 B.C. Because they are as big as a camel with spots like a leopard, they were thought to be the result of a freakish breeding of the two animals. Although we know the giraffe is not a combination of these two animals, the scientific name "camelopardalis" stuck.

We might laugh at the gullible Romans who believed you could combine a camel with a leopard to get a giraffe—but a bigger question is, "How can a creature be half God and half man?"

## **The Living Fossil**

A few days before Christmas 1938, a strange fish was caught in a net near the mouth of the Chalumna River in South Africa. Captain Hendrick Goosen thought the fish was bizarre enough to alert the local museum in the small town of East London. The director of the museum, Miss Marjorie Courtney-Latimer, described the creature as "the most beautiful fish I had ever seen, five feet long, and a pale mauve blue with iridescent silver markings." Marjorie had no idea what the fish was but knew it must go back to the museum at once.

Searching through the few reference books on hand, Marjorie found a picture that led her to a seemingly impossible conclusion. Her specimen bore striking similarities to a long-extinct prehistoric fish! She alerted the

prominent South African ichthyologist Dr J.L.B. Smith to this amazing discovery. The professor came at once and identified the fish immediately as a coelacanth (sê-le-kànth'). The fish would soon be called the “most important zoological find of the century.” They found a living dinosaur.

This particular species of fish was firmly believed to have lived long before the time of the dinosaurs, with the fossil record dating them back more than 360 million years. They were thought to have gone extinct around the same time as the dinosaurs—about 80 million years ago. Dr. Smith, Courtney-Latimer, and the coelacanth became overnight celebrities. When a one-day only public viewing was arranged, 20,000 visitors showed up. Since then, several other coelacanths have been caught, mostly around Indonesia.

How could the coelacanth supposedly disappear for more than 80 million years and then turn up alive and well in the 20th century? It had also been taught that the coelacanth was a “missing link” with its “proto legs” that were supposedly evolving into limbs. Yet if evolution is true and these fish have been around since before the dinosaurs, why have they not evolved any improvements in that long span?

#### ... And Did You Know?

- A turkey can run 20 miles per hour.
- A shark is the only fish that can blink with both eyes.
- A snail can sleep for three years.
- An ostrich's eye is bigger than its brain.
- Butterflies taste with their feet.



## Contents

**Living Along the 38th Parallel • City of the Dead • The Big House • Israel Facts**

### Living Along the 38th Parallel

On July 27, 1953, the Armistice Agreement established the demilitarized zone (DMZ) that separates North from South Korea. This imaginary line follows the 38th parallel, is about 150 miles long, and averages about two-and-a-half miles in width. The Armistice is the longest cease-fire in history, but it also means that the two Koreas are officially still at war. Today nearly two million troops face off along this line, ready to go to war at a moment's notice! One U.S. President even described it as "the scariest place on earth."

Yet to promote the illusion of peace, safety, and prosperity, farmers are paid to live near this war zone in a settlement called the "Freedom Village." They receive between \$80,000 and \$90,000 U.S. dollars each year, more than five times the average South Korean income, don't pay taxes or rent, and are exempt from military service. The catch is that they must live there more than 300 days per year, be off the fields before dark, and in their homes with the doors locked by 11 p.m.

### City of the Dead



One of the strangest cemeteries on earth is found in northern Cairo, Egypt. It's called the "City of the Dead." The word "cemetery" is actually a misnomer,

because this graveyard is actually teeming with life and activity. For hundreds of years, great rulers of ages past built acres and acres of huge and elaborate mausoleums and tombs. Tradition dictated that each of these tombs be built with its own “party room.”

Then around the 14th century, due to lack of space, thousands of poor and homeless seeking shelter began squatting in these tombs. Strangely, this cemetery is now classified as a suburb of Cairo. It has its own post office, police station, shops, electricity, running water, and sewerage system.

The resident have made creative use of the smaller gravestones by turning them into washing lines or tables. People actually live and conduct their lives in these tombs—sleeping, cooking, and eating—surrounded by their silent macabre neighbors.

The Bible teaches that there are only two classes of people, the living and the dead. That might be obvious, but according to the Word of God, not all of the living are alive and not all of the dead are dead. “He that hath the Son hath life; and he that hath not the Son of God hath not life” (1 John 5:12). And on another occasion, Jesus said, “Let the dead bury their own dead, but you go and preach the kingdom of God” (Luke 9:60 ). “God is not the God of the dead, but of the living” (Matthew 22:32).

## **The Big House**

Henry Ford’s mansion, named “Fair Lane,” still stands in Dearborn, Michigan, filled with elaborately carved woodwork and technical wonders as an example of this unique man’s innovation. For its location, Ford chose 1,300 beautiful acres overlooking the meandering River Rouge. Its dimensions are 56 rooms, three floors, and 31,000 square feet. Of its eight fireplaces, one of marble stands 13 feet high.

Even today, the house shows off its magnificent design, exquisite taste, and perfect workmanship. The price for constructing and furnishing it was about \$2 million—and that was back in 1915 when a loaf of bread was a nickel.

In addition to the main residence, the estate included a summer house, man-made lake, boat house, staff cottages, gate house, pony barn, skating house, greenhouse, root cellar, vegetable garden, thousand-plant flower garden, 10,000-plant rose garden, a maple sugar shack, “Santa’s Workshop” (for Christmas celebrations), working farm built to the scale of Ford’s grandchildren, agricultural research facilities, and 500 birdhouses to satisfy



Ford's interest in ornithology.

Henry Ford's ingenuity even reached to the power supply. Determined to be independent of public utilities, he built his own power plant, which was connected to the home by a 300-foot underground tunnel. The finely machined turbines fed electricity to the entire estate, with 550 switches providing light and power at the flick of a finger. There was even enough extra power to sell back to the utility company.

However, in April 1947, when torrential rains lashed the Detroit area, the River Rouge went on a rampage. It smothered the fire under the powerhouse boilers and caused the electricity to fail for the only time in more than 30 years. Paradoxically, that was the night Henry Ford lay dying in his bedroom. Though surrounded by engineering marvels, he left the world as he had entered it 87 years earlier—in a cold house lit by candles, only two miles from the farm where he was born.

When Jesus died outside Jerusalem four miles from the place of His birth, the sky went dark and the veil in the temple was ripped from top to bottom.

## Israel Facts

The state of Israel has only .8 percent of the world's population and is the world's 100th smallest country—yet the people can make claim to the following amazing accomplishments:

- ✓ 24 percent of Israel's workforce hold university degrees; 12 percent hold advanced degrees. That's the highest ratio in the world.
- ✓ Israel has the second largest number of startup companies in the world.
- ✓ Israel's economy of \$100 billion is larger than all of its immediate neighbors combined.
- ✓ Israel has the highest average standard of living in the Middle East and also exceeds the United Kingdom.
- ✓ Israel produces more scientific papers per capita than any other nation by a large margin—as well as one of the highest per-capita rates of patents filed.
- ✓ Israel has the world's second highest number of new books per capita.
- ✓ Israel has the highest percentage of home computers per capita.
- ✓ The cell phone was developed in Israel by Motorola.

- ✓ Israel is the only country in the world that entered the 21st century with a net gain in its number of trees.
- ✓ With an aerial arsenal of over 250 F-16s, Israel has the second largest fleet of fighter aircraft.
- ✓ Israel developed the airline industry's most impenetrable flight security. U.S. officials now look to Israel for advice on how to handle airborne security threats.
- ✓ Relative to its population, Israel is the largest immigrant-absorbing nation on earth.
- ✓ Israel has more museums per capita than any other country in the world.
- ✓ In 1991, during the first Gulf War, the Israel Philharmonic Orchestra played a concert wearing gas masks as scud missiles fired by Saddam Hussein fell on Tel Aviv.

It would certainly seem that God is blessing this little country! But why then is this unique nation so embattled?



## **Contents**

**Bible Lands • The Wicked Bible • Milk and Honey**

### **Bible Lands**

The nation most often mentioned in the Bible is Israel. But do you know which nation is second? It is the area known today as Iraq! Sometimes called the Fertile Crescent and the cradle of civilization, the names used in the Bible for this region are Babylon, Land of Shinar, Mesopotamia, and Nineveh. Everyone from Esther to Jonah, and from Daniel to Ezekiel, were stationed in this historic land.

On two occasions, the people of God have been carried off to the land of Iraq. The 10 tribes were carried off into Assyria in 721 B.C., and then Nebuchadnezzar destroyed Jerusalem in 587 B.C. and drove its inhabitants of Judah into 70 years of captivity.

This is one reason Saddam Hussein revered king Nebuchadnezzar as his hero—he longed to duplicate the feat of conquering Israel and ruling the Arab nations! In fact, Saddam once had himself photographed in a replica of the war chariot of Nebuchadnezzar, trying to convince people he was the reincarnation of the ancient king of Babylon. (Of course, the Bible also tells us that Nebuchadnezzar went insane for seven years.)

History records that Babylon was conquered by the Persians and then the Greeks, but after the death of Alexander, the great city of Babylon began to fade. Ultimately, the once great city ceased to be inhabited and the ruins were swallowed by the Euphrates river and shifting sand of the Iraq desert.

Many Christians firmly believe that Babylon must be rebuilt before the last events of prophecy can be fulfilled. But the prophet Isaiah clearly promised, “Nobody will ever live there again, it’ll just be a habitation of foxes and owls” (Isaiah 13:20, 21). Saddam Hussein desperately wanted to prove the Jewish prophet wrong and spent millions trying to rebuild the ruins of ancient Babylon in an effort to restore it to a thriving metropolis. Saddam’s grand plans to restore Babylon were of course thwarted by war and capture. Even

though Saddam had rebuilt some ruins, nobody wants to live there—the Bedouins believe the place is cursed, so it’s still a ghost town,”

If the Bible says Babylon will never be rebuilt, then what is the last-day Babylon spoken of in the book of Revelation?

## **The Wicked Bible**

Did you know that at one time, a printer lost his business just because he accidentally omitted a single, three-letter word from the Bible?

You probably know that the first book ever printed on a printing press was the Bible. But the quality and methods of printing in those years were very primitive, leading to many printing errors in these early Bibles. Although most didn’t cause any serious theological confusion, some of them were still worth a smile.

That is, until 1631—when King Charles I ordered 1,000 Bibles from an English printer named Robert Barker. Only after the Bibles were delivered did anyone notice this serious mistake: In Exodus 20:14, a very small word was forgotten by the printers—“not.” That might seem like a small mistake in a book with more than 700,000 words. But Exodus 20:14 happens to be one of the Ten Commandments. This little error changed the 7th commandment to say: “Thou shalt commit adultery”! This legendary edition became known as the “Wicked Bible.”

King Charles was not amused by the infamous printing blunder. He ordered the Bibles recalled and destroyed, took away Barker’s license to print Bibles, and fined him 300 pounds, a lifetime of wages in those days. Only 11 of the original 1,000 Wicked Bibles exist today.

Robert Barker’s mistake was an innocent one, but the Bible tells us that the Beast power would deliberately try to change God’s law.

## **Milk and Honey**



More than 20 times in Scripture, God speaks of bringing His people into a good land “flowing with milk and honey.” Why milk and honey?

Milk and honey are the classic odd couple for several reasons: Milk is a perfect culture for disease. Left in the open air without pasteurization, it will instantly begin to separate, spoil, and breed bacteria. On the other hand, honey is the only food that doesn’t spoil. It can be used as a food preservative and by itself will last practically forever. In fact, crystallized honey thousands of years old has been found in the pyramids, yet it was reconstituted after heating.

Honey placed on an open wound will help to protect, while milk will promote infection. One is produced by insects, the other by mammals. Milk and honey are also two animal products that can be eaten without killing the creatures.

Though it is not ideal, a person can live a long time on a diet of whole milk and natural honey with the pollen. However, because of their rich nature, God never intended that either milk or honey become a staple in man’s diet; it was considered in Scripture as a treat to be eaten sparingly. In Proverbs 25:16, King Solomon counseled, “Have you found honey? Eat only as much as you need, Lest you be filled with it and vomit.”

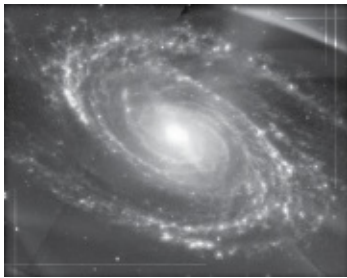
So why then does God consistently use this phrase “milk and honey” as a slogan for the Promised Land? The terms “milk” and “honey” are really symbols in Scripture for the sweet, rich truth of God’s Word. Here are a few examples: “For every one that useth milk is unskillful in the word of righteousness: for he is a babe” (Hebrews 5:13). “The statutes of the Lord are right, rejoicing the heart; The commandment of the Lord is pure, enlightening the eyes; ... Sweeter also than honey and the honeycomb” (Psalm 19:8–10). “Therefore the Lord himself shall give you a sign; Behold, a virgin shall conceive, and bear a son, and shall call his name Immanuel. Butter and honey shall he eat, that he may know to refuse the evil, and choose the good” (Isaiah 7:14, 15).

# FASCINATING SCIENCE

## Contents:

**Great Ball of Fire • Food Pyramid • Weather Whirlwinds • Colors of Heaven • When the Earth Moves • Terrifying Wall of Water • A Lot of Space • The Ocean is Falling • Nearby Planetary Neighbor Drops By • Noah and Plastic**

## Great Ball of Fire



The sun makes up 99.8 percent of the mass of our solar system, and it's one of the biggest stars in the galaxy (in the top 10 percent)! It's so big that a million earths could easily fit inside it. It also generates 386 billion billion megawatts every second, but still has enough fuel to warm the earth for another five billion years!

## Food Pyramid

Did you know that serving sizes on the United States Department of Agriculture Food Pyramid and on product nutrition labels are different? The two charts actually serve different purposes. The USDA serving size helps people meet daily nutritional needs with all food groups, while product labels only compare nutritional values between similar foods.

Therefore, a single slice of bread on a product label might be one serving on the label, but could be two servings on the food pyramid! Of course, confusion could be easily assuaged if product labels included the number of pyramid servings contained in a product label serving!

## **Weather Whirlwinds**

The United States experiences some of the world's most brutal weather events, with a typical year bringing several hurricanes, about 10,000 powerful thunderstorms, and up to 1,000 violently rotating columns of air called tornadoes.

Each year, America suffers through more tornadoes than every other place on the planet combined, resulting in 80 deaths and more than 1,500 injuries. In one 24-hour period in April 1974, a record 148 tornadoes tore through the Midwest, killing 309 people and injuring 5,000. The destructive weather forces can occur anywhere in the states at any time of year, though the peak season in the south is March through May.

The worst tornadoes, classified as F-5s, are capable of generating tremendous speeds—250 miles per hour or more. In the spring of 1999, Oklahoma recorded one its deadliest outbreaks ever: Near Oklahoma City, a massive F5 stayed on the ground for more than four hours causing incredible damage. An estimated 2,000 homes and 10,000 vehicles were destroyed—and more than 45 people died. Researchers clocked the wind at 318 mph, the fastest surface wind ever recorded on earth.

The awesome power of tornados has been demonstrated by things like transporting a 1,000-pound bale of hay for five miles, driving a piece of straw through a 2 x 4, imbedding a plastic music record halfway into a telephone pole, and leaving an 18-wheeler truck dangling from a tree. On April 24, 1990, a 100-yard wide tornado touched down in Barton County, Kansas, lifting 88 train cars off the tracks and stacking them three to four cars high.

Tornados also do some bizarre things, like putting cows in treetops. Another unusual incident occurred in 1957 in Thomasville, Alabama, when thousands of small fish, frogs, and crayfish fell from the sky. After a tornado pulled up lake water some miles away, its winds lost strength and the little animals rained across the countryside.

Fables talk about Texas' Pecos Bill riding a tornado, but did you know the Scriptures teach a Bible prophet actually rode a tornado to heaven? In 2 Kings 2:11, we see Elijah being taken up by a whirlwind into heaven.

... And Did You Know?

- No piece of paper can be folded in halves more than seven times.
- Googol is a number—a one followed by 100 zeros.
- A ten-gallon hat holds less than a quart of liquid.

## Colors of Heaven

No words are adequate to describe the magnificent splendor of the natural phenomenon known as the Aurora Borealis. This spectacular display is also called the Northern or Southern Lights, because they are seen predominantly around the polar regions of the earth.

The luminous marvel can appear in colors of red, green, yellow, blue, and violet—as well as a variety of forms, like patches of light, streamers, arcs, rays, or even shimmering draperies. The Northern Lights have been described since ancient times and are even mentioned in the Old Testament, but only recently has man discovered what causes it. The sun gives off high-energy charged particles, or ions, that speed through space at more than 500 miles per second. When this stream of plasma, or solar wind, strikes the earth's magnetic field, it is channeled toward the polar regions. When these electrically charged particles collide with the gases in the ionosphere, they start to glow. This is much the same way that electrons passing through the gases in a neon tube make a neon sign light up. So these spectacular auroras are really God's neon lights.

The brightest auroras seem to coincide with periods of greatest sunspot activity and with magnetic solar storms. It's been estimated that these solar winds can generate up to 100,000 megawatts of electricity in a three-hour exhibition. Scientists are still studying the solar winds, hoping someday the energy of the auroras might be used for practical purposes. Unfortunately, these intense displays also cause troubling interference with power lines, radio and television broadcasts, and satellite communications.

It is also true that the dazzling lights on earth can interrupt our communications with God.

## When the Earth Moves

Earthquakes conjure up terrifying images of the ground rocking and



rolling as if moved by some diabolical force from the abyss. Unlike tornadoes or hurricanes, earthquakes usually strike without warning.

In North America, when we hear the word “earthquake,” we typically think of Los Angeles, San Francisco, or maybe Alaska. But there also have been major earthquakes recorded in Boston; Charleston, South Carolina; and Long Island. Surprisingly, some of the greatest potential for a powerful North American earthquake is not on the Pacific or Atlantic Coast, but rather the states around mid-America. The granddaddy of great American earthquakes occurred between 1811 and 1812 on the New Madrid Fault (halfway between St. Louis and Memphis beneath the Mississippi). These 8.0 or higher earthquakes shook the entire United States, affecting the topography of the North American continent more than any other earthquakes in recorded history. The shock was so massive, large areas sank into the earth, new lakes were formed, 150,000 acres of forests were destroyed, and the Mississippi River ran backwards, permanently changing its course. One source notes, “Houses, gardens, and fields were swallowed up.” Fatalities and damage were low, because back then the area was sparsely settled. But in the last 200 years, those same areas have become heavily populated.

For years geologists have not been wondering if, but when, the big one will hit! Scientists believe there is a significant probability that a major earthquake with a magnitude of 6.0 or greater will strike in the near future, causing catastrophic loss of life and property damage in the billions. Several North America cities have been looking down the barrel of a loaded seismic canon, hoping for another day of grace. Jesus said just before His coming there would be earthquakes in different places.

## **Terrifying Wall of Water**

Tsunamis are among the most destructive of natural disasters, due in large part to the fact that much of the world’s population lives within a mile of the ocean. Tsunamis are sometimes called tidal waves, but they really have nothing to do with the tide. They are actually seismic sea waves caused by earthquakes, undersea landslides, volcanic eruptions, or even asteroids striking the ocean—all which result in a sudden colossal movement of the seawater.

Tsunamis can look like great massive towering waves or quickly rising monster tides that surge in without warning. Out in the deep ocean, a tsunami wave can travel at speeds greater than 500 mph—as fast as a jet plane! These

killer waves are often only a foot high in the deep ocean and might not even be noticed by boats in the area, but as they reach shallow water, the waves grow much taller, some over 100 feet high!

These frightening events actually occur all the time – perhaps thousands each year with the majority in the Pacific Ocean – but most are too small to notice. But every few years, some seismic event will produce a large tsunami wave that kills thousands of people. The famous volcanic explosion of Krakatoa on August 27, 1883, generated terrifying tsunami waves that were up to 120 feet in height. These waves destroyed 295 towns and villages in Western Java and Southern Sumatra, and over 36,000 people were drowned. The largest tsunami wave ever recorded in modern times was in Lituya Bay, Alaska. This mega-tsunami was caused by a massive landslide triggered by an 8.3 magnitude earthquake. When the wave rushed across the bay, it ran up the valley walls to a height of 1,720 feet. And most recently, on December 26, 2004, more than 160,000 people lost their lives in Southeast Asia by a tsunami triggered by a 9.0 earthquake at the bottom of the ocean.

In the Gospel of Luke, Jesus said one of the signs of the end would be the “distress of nations, with perplexity, the sea and the waves roaring.”

#### ... And Did You Know?

- The average raindrop falls at seven miles per hour.
- When the moon is directly overhead, you weigh slightly less.
- Rubber bands last longer when refrigerated.

## A Lot of Space

For the better part of recorded history, the earth was thought to be the stationary center of the universe, and the ancient wise men believed there were only 5,119 stars. The constellations were named and filled with colorful legends, and without a telescope, stars seemed to be just small, twinkling points of light that moved across the night sky.

Now we know that when we look at the heavens, what we once thought were single stars are often a gigantic spiral of stars called galaxies. A galaxy is like a colossal island in space made up of gas, dust, and millions of stars. On

clear nights, we can see the spiral edge of our own Milky Way galaxy. Unbelievably, our sun is just one small star in a pinwheel containing about a hundred billion blazing suns aligned in the form of a disk. And that's not counting the planets that could be orbiting around these stars.

Recent research indicates that there may be millions of galaxies in our universe. A few years ago, the Hubble Telescope took a picture of a small spot of sky near the Big Dipper. The area surveyed was no bigger than the appearance of a dime held 75 feet away. But in that tiny dot of sky, scientists counted more than 1,500 galaxies! If you take that number times the volume of space in every direction, you get millions of billions of galaxies with billions of stars in each galaxy!

The distance away from these galaxies is measured in light years. One light year is the distance you would travel if you could ride a beam of light 186,000 miles per second for 365 days. The Milky Way is some 30,000 light-years across, meaning you would have to travel the speed of light 30,000 years to cross just our galaxy! But you still haven't left our front yard. For example, if you wanted to visit the Andromeda Galaxy, you would have to travel the speed of light for over 2.4 million years.

When we consider the God who made all of this, we can only sing, "How Great Thou Art!" It is almost inconceivable that the God who made the infinite cosmos wants to dwell with us.

## The Ocean is Falling



You have probably heard the expression "raining cats and dogs." While there is no record of the sky ever showering canines and felines, other creatures

have indeed rained from the sky. For example, on March 5, 2000, farmers tending their fields in southern Ethiopia reported seeing, and smelling, an unusual downpour on their drought-stricken land. Suddenly, they were being pelted by millions of falling fish. For a country crippled by famine, this was a welcome and unexpected answer to their prayers. The miracle storm provided food, water, and fertilizer for their fields.

Reports of falling fish, frogs, tomatoes, and even coal date back to antiquity. In the first century, Pliny the Elder mentioned storms of frogs and fish. And meteorologists say it's more common than you might think for cloud bursts to open and release a hail of small fish, snails, or tadpoles. Weather experts explain these freak showers occur because powerful updrafts generated during thunderstorms form mini-tornadoes. If the storm brews out at sea, or crosses a river or lake, the tornado can suck up small fish or frogs swimming close to the surface. These waterspouts can then carry away the "raptured" creatures and deposit them several miles away—sometimes while still alive!

The Bible teaches that when Jesus returns, the saved will be caught up to meet the Lord in the air. But many Christians misunderstand how this will happen.

## **Nearby Planetary Neighbor Drops By**

In 2003, Earth had its closest approach to Mars in thousands of years ... and it won't happen again until 2287. Due to the way Jupiter's gravity tugs on Mars and perturbs its orbit, astronomers can only be certain that Mars has not come this close to Earth in the last 5,000 years or more. The encounter culminated on August 27, when Mars came within a hair's breath of Earth—4,649,589 miles. Next to the moon, it was the brightest object in the sky and with a 75-power telescope, or good pair of binoculars, Mars looked as large as the full moon to the naked eye. It was an exciting event when you consider that it would never happen again for those living—or for their children or grandchildren!

Yet Jesus said there is a favored generation living at the end of time who will be privileged to look up and see His return in person.

## **Noah and Plastic**

Plastics are one of the most versatile materials in the world. They can be

made hard as stone, strong as steel, transparent as glass, light as wood, and elastic as rubber. Plastics are also lightweight, waterproof, chemical resistant, and can be produced in almost any color.

At night we sleep on pillows and mattresses under blankets and bedspreads made of plastic materials. In the morning we step out of bed onto polyester and nylon carpets. Plastics are used extensively in the computers we use, the utensils we cook with, the recreational equipment we play with, the houses and buildings we live and work in, and the cars we drive. For example, the average car contains over 300 pounds of plastics—nearly 12 percent of the vehicle's overall weight! Telephones, textiles, compact discs, paints, plumbing fixtures, boats, health products, furniture, and thousands of other domestic products are made of plastics. In fact, in 1979 the volume of plastics produced in the United States surpassed the volume of steel produced!

But where does all this plastic come from? Most plastic is chemically fabricated from fossil fuels, such as oil, coal, or natural gas. It then begs the question, "Where did all the gas, oil, and coal come from?"

These great reserves of fossil fuels were formed from ancient vegetation and animals; yes, even dinosaurs that lived before Noah's flood. As these tremendous forests with lush plants and copious animal life died in the great flood, the wind and currents pushed them into great heaps. These immense deposits of decomposing animals and plants were eventually buried under deep layers of mud and silt, which gradually hardened into rock. After 4,000 years of heat and pressure, these enormous pockets of compost were compressed and transformed into the great fields of coal, oil, and natural gas.

That's right, the car you drive is not running on horsepower—but dinosaur power. And your computer is made of ancient ferns! It's amazing to consider that so many of our modern plastic products are made from ancient plants and animals.

But God is the master of converting matter. He turned water to wine, and sticks to snakes. The Bible even tells us that God once turned a woman into salt.

#### ... And Did You Know?

- A "jiffy" is an actual unit of time for 1/100th of a second.
- 111,111,111 multiplied by 111,111,111 equals 12,345,678,987,654,321





## Contents

The Wasp Flower • Xeroderma Pigmentosum • One Head Better Than Two • It's Your Heart That Counts • Vanilla Extract • Juicy Red Killer? • Cinchona Medicine • Cochineal Red • Living Light • Blood Cures

## The Wasp Flower

Most plants and flowers must pollinate to survive, so the Lord has devised many ingenious ways to help them exchange these precious particles of life. Wind is the most common, and there are also the many flowers and trees that are pollinated by enticing with sweet nectar the birds, the bees, and even some mammals. And amazingly, some flower species only pretend to have food that insects want, emitting the scents of things like coconut or even rotting meat to attract them.

Some orchids, however, achieve pollination by appearing to offer insects the promise of marriage. Parts of the flower are designed to resemble the female versions of certain insects, and the imitation is often astounding. Take, for example, the Australian hammer orchid, which takes advantage of a mating ritual of the thynnid wasp. The lower lip of the hammer orchid's flower mimics a female wasp resting on a twig looking upward waiting for a male flying by to spot her. Even to the human eye, it almost perfectly resembles the plump, wingless female thynnid wasp, complete with a shiny head and furry body. The orchid even releases an enticing female wasp pheromone—a chemical copy of the same perfume the female wasp wears when she's ready for marriage. Poised at the end of an arm just above this alluring decoy are sticky bags filled with pollen.

A male thynnid wasp flying by, lured by the imitation scent, will grab the decoy and try to fly off with "her" in his grasp. As he takes off, however, his momentum flips him and his flowery pretender up and over, right into the sticky pollen sacks. After realizing his mistake, he releases the decoy—and flies off, only to be fooled again by another hammer orchid that he now pollinates

with the pollen he picked up on his previous bad date. In the process, the wasp transfers pollen from flower to flower.

When real female thynnid wasps are around, males will invariably choose a live one over the impostor. For this reason God conveniently designed these orchids to bloom in the brief period several weeks before female wasps emerge from underground, giving the flower a temporary advantage when male wasps are flying, but females are not yet available. Mimicry in nature is truly remarkable, even humorous, but a wolf in sheep's clothes is no laughing matter when it comes to our souls.

## **Xeroderma Pigmentosum**

The initials XP are short for Xeroderma Pigmentosum, a very rare and incurable skin disease that mostly affects children. The malady prevents skin cells from repairing once they have become sun-damaged. Only about one in a million are affected by this life-threatening disease, but due to its nature, those afflicted by XP are 1,000-plus times more likely to develop skin cancers or lose their sight than healthy children.

In order to prolong their lives, affected children must take extreme measures to avoid all direct and indirect sunlight, as well as light from fluorescent bulbs. They must virtually live their lives slathered in sunscreen, hidden away in dim shadows and darkness all in an effort to decrease their chances of cancer. They can only come out to play after dark and live in fear of daylight!

These XP-afflicted children can make us think of the millions of other children who are trapped in another kind of darkness—spiritual darkness. They have never been to church or heard the story of Jesus. They are raised without knowing that God has a great plan for their lives. As the Bible says, “They do not know, nor do they understand; They walk about in darkness” (Psalm 82:5).

## **One Head Better Than Two**





A teenager in Virginia was shocked to find a two-headed turtle behind her home. She caught the poor creature and watched as the two freakish heads did a tug-of-war over a piece of food she gave them! According to scientists, two-headedness can occur in all animals, but the lifespan is typically short. The reason is that each head tends to work independently of the other, controlling its own side of the body, and therefore creating disunity, confusion, and frustration. Unless one head takes primary control, the creature will soon die from starvation and indecision.

Many believe it is a sin to be tempted. This is not true. As the Bible declares, we have a High Priest who was “in all points tempted like as we are, yet without sin” (Hebrews 4:15). Jesus was tempted in the wilderness, so it can’t possibly be a sin to be tempted. Rather, it is a sin to give in to temptation.

#### ... And Did You Know?

- Broccoli and cauliflower are the only vegetables that are flowers.
- Almonds are members of the peach family.
- The only food that doesn’t spoil is honey.

## It’s Your Heart That Counts

If you want to know approximately how long an animal is going to live, determine how fast its heart beats. Most creatures get about 800 million heartbeats per life, so animals with a rapid heart rate will reach the 800 million average sooner than those with a very slow metabolism.

For instance, a mouse’s heart beats about 700 times per minute, and they live less than three years. The hummingbird’s heart beats up to 1,260 times per minute during the day, but it actually slows to 50 beats per minute at night, and they live twice as long as mice. But an elephant’s heart plods along at about 35 beats per minute, and they have been known to live more than 80 years.

Romans 2:6, 7 says God “will render to every man according to his deeds: To them who by patient continuance in well doing seek for glory and honour and immortality, eternal life.”

### ... And Did You Know?

- You burn 20 calories per hour chewing gum.
- A one-minute kiss burns 26 calories.
- Frowning burns more calories than smiling.
- You will burn about seven percent more calories walking on hard dirt than on pavement.

## Vanilla Extract

Vanilla bean is the fruit of a unique species of fragrant orchid that is native to the rainforests of Mexico and Central America. Indigenous natives discovered that the tasteless and odorless vanilla bean, when dried by months of tropical heat and humidity, produced a rich taste and aroma. Vanilla is the only orchid known to bear edible fruit. The Indians of Mexico discovered how to hand-pollinate the vanilla orchid, which only flowers for one day a year.

In 1520, Aztec emperor Montezuma served Spanish explorer Hernán Cortez a golden goblet filled with a thick, syrupy mixture of cocoa beans, ground corn, honey, and black vanilla pods. Cortez conquered the Aztecs, killed Montezuma, and brought vanilla to Europe, where it achieved great popularity. Queen Elizabeth I loved vanilla so much that she eventually refused all foods unless prepared with it. And Thomas Jefferson, having acquired a taste for vanilla in France, was the first person to import it to the United States.

The vanilla bean requires approximately nine months to reach maturity, growing from 6 to 10 inches long like an overgrown string bean. Harvested beans are immersed in a hot water bath, then put into wooden boxes and covered with blankets to lock in the heat, where they will “sweat” for 24 to 72 hours, beginning the enzymatic change that produces vanillin. Finally, the beans are placed on blankets and dried in the sun for three to four months to complete the curing process. The cured beans, wrinkled and chocolate colored, are tied in bundles, where they are weighed, chopped, and percolated in large

stainless steel containers, much like coffee. After the vanilla is aged for several weeks, the expensive extract is bottled and shipped to stores.

Today vanilla beans are grown primarily in Madagascar, Indonesia, Tahiti, and Mexico, and are by far the world's most popular flavor. The precious extract is used in ice cream, puddings, cakes, chocolates, baked goods, syrups, candies, liqueurs, tobacco, soft drinks, and even in perfumes. You can understand why vanilla is one of the most expensive flavorings in the world to produce, second only to saffron.

The Bible says that salvation is the most expensive commodity in the universe. But it is free for the asking. How can we understand this paradox?

## Juicy Red Killer?



In 1820, a crowd of curious onlookers gathered around the county courthouse in Salem, New Jersey. The county fair was in progress, and they jostled one another in eager anticipation, for they were about to witness a daring feat.

Soon a man appeared on the steps, holding in one hand a piece of poisonous fruit that had been part of the fair's decorations. As he held it up for them to see, members of the crowd whispered excitedly to one another. "Is he really going to eat it?" some asked in disbelief. The man was Colonel Robert Gibbon Johnson—and the fruit was a tomato, called in those days the "love apple" and considered deadly poison.

Spanish conquistadors brought the first tomato seeds from Peru to Italy. Upon arrival, the Italians believed the heart-shaped tomato was an aphrodisiac, thus tomato in Italian is *poma amoris*, or "love apple." Love apples were tokens of courtship or lawn decorations. Young men gave them to their girlfriends, who would afterward wear the seeds in sachets around their necks. The fruit was admired for its beauty, but because of its relation to deadly nightshade, the tomato was regarded as poison by Americans and no one

would dream of eating it.

The crowd gasped in horror as the Colonel placed the tomato in his mouth and ate it with apparent relish. They waited breathlessly, expecting soon to see him collapse writhing in dying agony on the courthouse steps ... but nothing happened. Instead, praising the color and texture, he ate a second tomato, explaining that tomatoes were delicious either cooked or raw. He then invited the onlookers to join him in his meal, and a few of the braver ones went forward. Soon they too were relishing the tomatoes' flavor.

The news spread quickly, and eventually tomatoes became a widely accepted article of diet providing a primary source of minerals and vitamins A and C. Today, the United States grows about 9 million metric tons of tomatoes yearly, and there are more varieties of tomatoes sold than of any other fruit.

The Bible teaches that the devil is a master of deception in convincing people to fear what is good and to eat what is bad.

#### ... And Did You Know?

- Chewing gum while peeling onions will keep you from crying.
- Strawberries contain more vitamin C than oranges.

## Cinchona Medicine

Malaria has been killing people with deadly fever as far back as written history began. Little was understood about the nature of the disease, or how to treat it, until the middle of the 17th century. In Peru, a beautiful Spanish countess, the Condesa de Chinchón, was cured of malaria by drinking a tea made from the bark of a mysterious tree that Jesuit missionaries gave her. Nobody knows for sure how the priests learned of this remedy, but there is a legend that supplies a plausible account.

The tale starts with an Indian who was lost in the Peruvian jungle and burning with fever from malaria. He eventually stumbled upon a pool of water and threw himself down at the edge to satisfy his thirst. One gulp told him that the water had been tainted by the fallen bark of a tree known by the natives as quina-quina. It was believed that the tree was poisonous, but the unfortunate man was so thirsty that he cast aside these worries and drank his full.

Much to his surprise, he did not die but felt his strength returning. He

eventually found his way back to his own village where he made a full recovery. He told everybody about the pool and the taste of the quina-quina bark. Thereafter, the local populace used the bark of the bitter tree to make quinine in their fight against malaria. In 1742, the tree was renamed “cinchona” by a Swedish botanist in honor of the Countess of Chinchon, reputed to be the first European to use an extract of bark to cure her of malaria.

However, although quinine kills certain forms of the parasite that causes malaria, it cannot kill the parasite in all stages of its life cycle. Quinine, therefore, is not a true cure for malaria, but it is very useful in suppressing and controlling the recurring attacks of fever that often kill.

Still, this deadly parasitical infection has the vicious ability to mutate. Every year, malaria still kills up to 3 million people, more than half of which are children—and 300 to 500 million fall ill with the disease. Some doctors even argue that it may have even caused the deaths of one out of every two human beings who ever lived on the planet.

Yet millions of lives have been saved from using the quinine medicine from the miracle tree. The Bible speaks of another tree that has the ability to heal a person from the deadly disease of sin.

## Cochineal Red

Among the ancient Aztecs, red dye was more valuable than gold. That’s because to acquire this bright red colorant, it required the labor of hundreds of subjects to comb the desert in search of its source—the tiny female cochineal beetle. A pound of this rare extract required about a million insects. (Equally amazing, back in the days of the Roman Empire, a pound of royal purple dye required four million mollusks.)

After the arrival of Cortez in the 1500s, the Spaniards traded for the dried remains of the red cochineal, whose dye was stronger than ever before known and created a brilliant a color that no one could duplicate. Soon after its discovery, Europeans used it for fabrics and illumination in addition to cooking. In the years that followed, Michelangelo used it in paintings, and the British and the Canadians for their redcoats. It is even thought that the first U.S. flag made by Betsy Ross had cochineal red stripes.

Today, less expensive synthetic dyes have replaced it, but it is still used as a natural FDA-approved coloring for food, drugs, and cosmetics. In fact, strange as it may sound, some brands of fruit juice use this red bug juice as a colorant.

The story of cochineal red gets still more fascinating. The Spanish traders never told the Europeans of its insect origin. Because the little beetles looked so much like a seed, it was traded as grain. For almost 300 years, the Spaniards perpetuated the notion that “dyed in the grain” was their special process for this permanent crimson dye that never faded. And that’s where we get the English term “ingrained.” Did you know the Bible teaches that you can wash red stains with red blood and get white.

## **Living Light**

Bioluminescence is an amazing phenomenon in which a chemical reaction in living organisms produces light without any appreciable heat. This cool light, usually green or blue, results from a chemical reaction involving specialized phosphorus-containing molecules in the organisms.

Bioluminescence is found in creatures ranging from the common firefly and glowworms, to some species of bacteria, algae, and fungi. This built-in lighting system can also be found in many invertebrate animals like squid, jellyfish, worms, and crustaceans. In fact, in the dim mid-water or twilight region of the ocean (between 200 to 1000 yards deep), 90 percent of all animals, including shrimp, produce light.

This organic light is produced in some ways like the popular luminous glow-sticks. When a glow-stick is snapped, two chemicals mix, react, and create a third substance that gives off light. Marine organisms do essentially the same thing within their special organs or cells. One substance, luciferin, is mixed with an enzyme, luciferase, and a new molecule is formed that gives off that glowing blue-green light. Science has barely touched the surface when it comes to replicating this efficient light production.

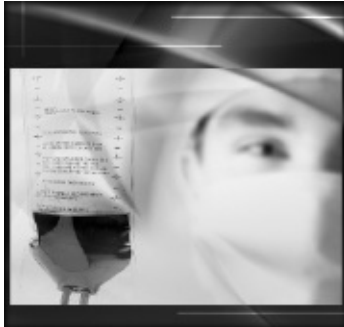
Bioluminescence is used in nature for a large variety of reasons. Some deep-sea fish are equipped with fleshy organs that produce luminescence to which prey is attracted. The flashes emitted by male and female fireflies are used as species-specific signals for mating. It is also an obvious form of communication between species in such a dark environment, and the light can be used to repel predators.

Incredibly, the sophisticated squid can control when the light is produced, its color, and its intensity. But most sea creatures, like the microscopic drifting algae, have simple light-producing systems that are stimulated by water movement; this is what causes the glow in the wake of a large ship passing

through the water. During blackout conditions in war, more than one lost pilot has found his way back to the aircraft carrier by following the green glow behind the moving ship.

In like manor, only churches that are active and moving produce light that can attract the lost.

## Blood Cures



In Ghana, West Africa, around 1927, a blood specimen was taken from a poor native, named Asibi, who was very sick with yellow fever. Using that blood sample, and after years of testing and experimentation with monkeys, mouse brains, and chick embryos, a mild strain of yellow fever was developed into a vaccine.

Asibi eventually recovered, but all the vaccine manufactured since 1927, by the Rockefeller Foundation, the government, and other agencies, derives from the original strain of virus obtained from this humble native. Carried down to the present day from one laboratory to another, through repeated cultures, and exponential multiplication, it has offered yellow fever immunity to countless millions of people around the world.

Through the creative imagination of science, the blood of one man in West Africa has been made to prolong and improve life among the whole human race. One man's blood provided it all. We can acknowledge intellectually the existence of the vaccine. We can rejoice in the marvel of its provision and the man who provided it, but unless an individual receives it, it would be of no personal benefit. So how does that translate to us in our relationship with Jesus?

... And Did You Know?

- **You burn more calories sleeping than watching television.**
- **Licking a stamp burns 10 calories.**
- **Smelling bananas and/or apples can help you lose weight.**
- **Peanuts are one of the ingredients of dynamite.**





## Contents

**Homesick • Telephone Man • A Mother's Love • Magic Man • A Brave Explorer • Are You Wearing My Tent? • Scorpion Lover • World Walker • Diamond Farmer • Johnny Appleseed • The Renaissance Man • A Tall Tale • Wide Asleep • A Clean Record • Civil War Pivot Man • Was There an In-flight Movie? • Selling the Moon**

## Homesick

In the spring of 1927, Lillian Alling, a young emigrant woman living in New York City, became very homesick and decided to return to her family in Russia. After two unhappy years among crowds of people, the peasant girl knew that life in the noisy city was not for her.

But Lillian could not afford the passage by boat back across the Atlantic, so this determined woman chose to walk—12,000 miles west to Russia! A very timid lady, Lillian refused to accept rides from strangers, so supplied with hand-drawn maps, an iron rod for protection, and a few dollars, she began her long journey on foot. Averaging more than 30 miles a day, the slight 25-year-old passed through Chicago and on to Winnipeg.

In the northwest in those times, there were no good roads to speak of, and, except for the odd trading post or telegraph station, there was nothing but an unbroken stretch of the world's toughest terrain. Still she braved on across Canada, through Saskatchewan, Alberta, and British Columbia. When she came to a swollen stream, she would float across clinging to a log. She slept in the open, enduring untold hardships, surviving on a meager diet of bread and wild berries. In Vancouver, locals were concerned by her ragged condition and lack of provisions, so to prevent her from going on, she was arrested for vagrancy and thrown in jail.

She used her three months in the prison to regain her strength, and when spring arrived, Lillian resumed her daunting quest. Across the Yukon and Alaska, telegraph station operators kept track of her progress. They gave her a few clothes and even a dog. One telegrapher died in a blizzard while searching

for her—when she was told the news, she wept.

Finally, she arrived in Nome, Alaska, in July 1929, wearing a different type of men's shoe on each foot. But this was only the halfway mark for her epic journey. Soon after leaving Nome, Lillian was last seen rowing a boat from Cape Prince of Wales across the 36 miles of the Bering Strait to Siberia. In the fall of 1930, one man claimed to have seen a woman on the Siberian coast explaining that she had just walked all the way from New York, but there is no confirmation that she ever made it home.

We marvel at Lillian Alling's incredible determination to get to her home in Russia, yet so many are indifferent about reaching the home Jesus has prepared for them in heaven.

#### ... And Did You Know?

- Emilio Marco Palma was the first person born in Antarctica in 1978.
- Hitler was voted *Time* magazine's man of the year in 1938.

## Telephone Man

In 1876, Alexander Graham Bell was having a hard time finding investors for his new conversation device. People scoffed that his "talking box" was just a clever novelty that would never replace the popular telegraph. But Bell stepped out in faith and continued working on his dream of two-way voice communication.

He had so much faith in his invention that he risked everything, giving up his job and living on mostly bread and water—just for his idea! And Bell lived to see the telephone replace the telegraph, and he died a wealthy man.

#### ... And Did You Know?

- Stalin was only five feet, four inches tall. His left foot had webbed toes, and his left arm was noticeably shorter than his right.
- During his entire 47 years in government, Herbert Hoover turned over all his salary to charity.

## **A Mother's Love**

One cold winter in South Wales, a mother was traveling cross-country with her young babe and was caught in a blinding blizzard. The following day, upon learning she never reached her destination, a group of men went out searching for her. They soon spotted a large mound of snow in the road that she was known to have traveled. They quickly swept away the white powder and found the frozen body of the barely dressed woman.

In her arms was a bundle of clothing, which they unwrapped to reveal her baby—alive. In the struggle of the snowstorm, the woman had taken off most of her clothing and wrapped it around the little boy to keep him alive. She knew that she would perish, but that the baby might survive. The baby was David Lloyd George, who lived on to become the celebrated Prime Minister of Britain during World War I. One of the reasons he achieved such greatness is that he never forgot about his mother's love and sacrifice.

God has infused into mothers the instinct to protect their offspring even at the peril of their own lives. The Creator has pre-wired this sacrificial nature not just into human mothers, but also in the animal kingdom. In the mountains of Northern California, we have a lot of black bears that are generally harmless. On the few occasions when black bears have attacked humans, it's usually because someone came between a mother and her cubs. Once a car was ripped apart by a mother bear because her cub was trapped inside when a well-meaning camper tried to take it home with him. As the Bible says, "I will meet them like a bear deprived of her cubs; I will tear open their rib cage" (Hosea 13:8 NKJV).

## **Magic Man**



Born in 1874, Harry Houdini became well known as the world's most famous escape artist. Millions were amazed by his remarkable ability when he liberated himself after being chained with a series of handcuffs, padlocks, and foot manacles—all in the middle of a high-security prison cell!

The Scriptures teach that Jesus' primary mission was to "preach good tidings to the poor ... to heal the brokenhearted, To proclaim liberty to the captives, And the opening of the prison to those who are bound" (Isaiah 61:1). In other words, Jesus came to save us from the bondage of sin. This is the very essence of the entire Bible story. The Exodus, God saving a nation from bondage, was a perfect example of how He wants to save us from the slavery of sin. "Most assuredly ... whoever commits sin is a slave of sin" (John 8:34 NKJV).

## **A Brave Explorer**

In 1526, explorer Francisco Pizarro heard that his weary men wished to take a relief ship from Peru back to Panama. He unsheathed his sword, drew a line in the sand, and said, "Comrades, on that side are toil, hunger, desertion and death; on this side, ease and pleasure. There lies Peru with its riches; here Panama with its poverty. Choose each man what best becomes a brave Castilian. For my part I go to [Peru]."

With these words, he crossed the line and was followed by 16 shipmates. They then went on to discover the vast riches of the remarkable Inca Empire. By remaining vigilant to the end, even in the face of adversity, Christians will find their rich reward at the end of time.

## **Are You Wearing My Tent?**

In 1853, Levi Strauss sailed to San Francisco hoping to sell denim tents to the gold rush miners. Finding little market for the tents, Strauss prayed about what to do with all his cloth and rivets. He was inspired to make a few pairs of pants of the tough cotton material and fastened the stress points with the tent rivets.

The rugged pants and overalls were an instant hit with the miners and lumberjacks because of their remarkable durability. He patented the invention in 1873, and the rest is history. Amazingly, even after 130 years, Levi's blue jeans are still in style!

## Scorpion Lover

Kanchana Ketkeaw made herself comfortable in the glass box where she lived for 32 days. She had a refrigerator, television, magazines, a small plant ... and 3,400 scorpions! On October 23, Kanchana emerged from the room, setting the world record for the longest stay in a room full of poisonous scorpions. She said, "It was like being in a room at home, only with thousands of little friends."

Living with scorpions is not unusual for the 30-year-old Thai entertainer. She has performed with the menacing little creatures daily as a tourist attraction, even putting them in her mouth as part of the routine. Kanchana has been stung hundreds of times—nine times during her record-breaking stay in the 130-square-foot room. She was stung once when she got out of bed without looking at the floor. But Kanchana says the venom has little effect on her because of the immunity she has built up over seven years.

Some of the scorpions died in the glass chamber so new ones were added; some even gave birth. She fed them a daily mixture of raw egg and ground pork. Her room, which was located at a resort town department store, had a bed and a toilet guarded from the public eye by a curtain. Kanchana was allowed to leave her room for 15 minutes every eight hours to shower.

The previous world record was set a year before by a Malaysian woman who endured 30 days with 2,700 scorpions. Before her record-breaking attempt was approved, Kanchana needed to send a full report, including video footage and photos, to the Guinness World Records office in London.

You can't help but wonder what would possess a young woman to willingly live with scorpions. But thousands of young people are stung every day by

choosing to marry the wrong person.

## **World Walker**

Did you know that the average pair of feet takes about 8,000 steps a day? That's about two-and-a-half million steps a year, meaning for an average lifetime, you will walk approximately 115,000 miles.

But some people walk much farther. In 1970, David Kunst got the idea to walk around the world. The moon landing the summer before had inspired David's interest in adventure. So the 30-year-old and his brother John decided to walk around the world. Accompanied by a pack mule named Willie Makeit and traveling as volunteer ambassadors for UNICEF, Dave and John left Waseca, Minnesota, on June 20. They walked to New York, flew to Portugal, and walked all the way to Iran. Tragically, about two years into their epic journey and halfway around the world, John was killed and David was wounded by Afghan bandits.

After four months of recuperating at home, David, now joined by his brother Peter, resumed the walk from the very site of the shooting. One year later, they crossed India and moved on to Australia. By this time, Peter needed to return home and they were on their third Willie Makeit mule.

Then while walking across the Australian desert, Dave's mule died. But Dave would not give up. Providentially, an Australian schoolteacher named Jenni Samuel volunteered to tow the mule's wagon with her car. Along the way, she and Dave fell in love and were married after the walk ended.

On October 5, 1974, David Kunst walked into Waseca, Minnesota, and became the first person verified to have circled the landmass of the earth on foot. His historic 15,000-mile odyssey required four-and-one-half years, 22 pairs of shoes, and three mules. The long walk earned Kunst an entry into the Guinness Book of World Records, a spot on Ripley's *Believe it or Not*, and the opportunity to be a torchbearer for the 1996 Olympic games.

Walking around the world is quite a feat (pardon the pun), one that requires a lot of soul (pardon this pun too), but did you know the Bible talks about a man who walked all the way to heaven?

## **Diamond Farmer**



Ali Hafed was a prosperous Persian farmer living in India. He owned a large and beautiful section of land decorated with orchards, streams, and fertile fields. He was happy and content with his family, until one day a Buddhist monk came to visit. The monk told him extraordinary tales of other farmers who'd become tremendously wealthy from discovering diamonds.

After hearing this, Ali became obsessed with thoughts of finding diamonds. No longer happy with his farm, he eventually sold it, left his family with relatives, and began searching for diamonds. Ali spent the rest of his life wandering the African continent, and then Europe, in search of these illusive gleaming jewels. Finally, worn out and penniless, in a fit of despondency, he threw himself into the Bay of Barcelona in Spain and drowned.

Meanwhile, the man who bought Ali's farm happened to be passing a small stream on his new property when suddenly his eye caught a bright sparkle of blue and red light from the stream bottom. He bent down and picked up a good-sized crystalline stone. He took it home and put it on his mantle as an interesting curiosity.

Several weeks later, a visitor spotted the stone, studied it closely, weighed it in his hand, and nearly fainted. He asked the farmer if he knew what he'd found. When the farmer said he thought it was just a piece of crystal, the visitor told him that he'd probably found one of the largest diamonds ever discovered. The skeptical farmer said that his stream was full of such stones—not as large as the one on the mantle, but they were sprinkled generously along the stream bottom.

The farm that Ali Hafed had sold to go in search of diamonds turned out to be the Golconda mines of India. For years it was the most productive diamond mine in the world, providing some of the largest diamonds in the English and Russian crown jewels. Ali had owned acres of diamonds, but had sold his

prosperous farm for practically nothing in order to look for diamonds elsewhere.

Real happiness is much closer than most people think, just outside the door of their heart.

## **Johnny Appleseed**

Most Americans have heard the legend of Johnny Appleseed, who went about the frontier with a kettle on his head while scattering apple seeds. But unlike Pecos Bill and Paul Bunyan, there really was a Johnny Appleseed. His real name was John Chapman, and he lived between 1775 and 1845. John really had an extraordinary love for apples, and he wanted everybody to be able to enjoy them. So he came down from Philadelphia with apple seeds he collected and planted them throughout the Ohio River valley.

He roamed the wild countryside vigilantly looking for places young apple trees could flourish—usually by a spring or on the side of a hill with rich soil. With a hopeful prayer, he gently pushed the little seeds into the earth and then built a brush fence to protect the saplings before moving on to the next promising place.

Every fall, he'd return to the cider presses in Pennsylvania where he selected good seeds from the discarded apple pressings. These he carefully washed, dried, and bagged for planting the following spring.

As the orchards grew, he would sell or trade the young trees to the thousands of new farmers that were settling the land. Even though he lived on the frontier, he didn't eat meat, but he always carried a stewpot or kettle with him. For these he could gather nuts or berries in season, carry water, boil potatoes, or cook ground cornmeal. He has been pictured wearing a pot on his head, but more likely he kept it tied to the top of his backpack.

John Chapman never married, but he was a deeply religious man who loved people and especially children. As the settlers moved into the wilderness, his lonely nights were fewer because he was a welcomed guest at every cabin. On most nights, he would hold them all enthralled with his stories of the wild woods or read to them from the Bible he carried. As a result of practicing his favorite hobby for about 50 years, this one man provided mountains of apples to feed thousands of people for several generations!

There is no way to estimate how many seeds John planted or the number of orchards he created in the territory south of the Great Lakes between the Ohio



and Mississippi Rivers. Even to this day, that region is a very rich source of beautiful apple trees. Do you ever wonder what the world would be like if every Christian felt that same compelling desire to spread God's seeds of truth?

## **The Renaissance Man**

It is nearly impossible to discuss the Renaissance without mentioning Leonardo da Vinci. Few if any have been born with an intellect that could match the genius of the Florentine man. Da Vinci's artworks, like the Mona Lisa, are remarkable for their harmony, soft light, and sharpness of observation.

But Leonardo was more than just an outstanding artist; he was a universal genius in science, architecture, and engineering. His interests were so broad and numerous that it boggles the mind. He observed everything from the properties of herbs to the movements of the heavens. A century before Galileo, Leonardo was able to find new fundamental knowledge about time keeping and to connect it with machines, designing clocks that operated by weights, sand, and water.

In the fields of anatomy, botany, zoology, geology, hydrology, aerology, optics, and mechanics, he was far ahead of his time. He designed everything from fortifications, weapons, and engines of war to beautiful gardens, castles, churches, canals, and multi-tier roads. He devoted some time to music and soon learned to play the lyre; he could also sing and improvise well. He even made himself a silver lyre, shaped like a horse's head.

He loved animals and trained them with great kindness and patience. Often, when passing market where live birds were sold, he would let them out of their cages and then pay the vendor the price. A vegetarian, Leonardo wrote, "I have from an early age renounced the use of meat, and the time will come when men such as I look upon the murder of animals as they now look upon the murder of men."

Leonardo da Vinci was so brilliant, one observer noted that he could write a letter with one hand and draw with the other simultaneously! Many know Leonardo da Vinci invented the scissors, but his other ideas were often far ahead of his time and only realized centuries after his death, such as the tank, the helicopter, and the parachute. In fact, in 1999, some Englishmen built a parachute according to Leonardo's indications and tried it out: It worked perfectly.

Looking back on his drawings and designs, it almost seems as if he could see into the future. This naturally makes us wonder, can any man really know the future?

## **A Tall Tale**

When Robert Wadlow was born in Alton, Illinois, in 1918, he weighed a healthy eight pounds, six ounces. But he started drawing attention to himself when at six months old, he weighed 30 pounds. A year later at 18 months, he weighed 62 pounds. But Robert wasn't fat, he was tall!

The boy continued to grow at an astounding rate, reaching six feet, two inches and 195 pounds by the time he was eight. When he was 13, he became the world's tallest Boy Scout at seven feet, four inches. Eventually, Robert's height of 8 feet, 11.1 inches qualified him as the tallest person in modern history.

His clothing required three times the normal amount of cloth, and his size 37 shoes cost \$100 a pair (a lot of money back in the 1930s). When Robert turned 20, the International Shoe Company provided his shoes for free and hired Robert and his father to promote the company. The father and son team visited more than 800 towns in 41 states, traveling over 300,000 miles on their goodwill tour. His father had to modify the family car by removing the front passenger seat so Robert could sit in the back and stretch out his long legs. Even though Robert was enormous, he was a gentle giant and very good-natured about all stares he received. He tried to maintain a normal life, and enjoyed stamp collecting and photography.

Robert's unique size was attributed to an overactive pituitary gland, which produces growth hormone. Modern medicine can compensate for such problems today, but in the 1930s, such therapy was not available. As a youth, Robert enjoyed good health, but when he got older his large feet troubled him. He had little sensation and didn't feel any chafing until blisters formed. While making an appearance in Michigan, a fatal infection set in. On July 15, 1940, Robert passed away in his sleep. At the time of his death, he weighed 490 pounds. Robert's body was brought back to his hometown for burial; more than 40,000 people attended the funeral. The 11-foot long 1,000-pound casket required 20 men as pallbearers. Robert's gravestone simply reads, "At Rest."

## **Wide Asleep**

Dr. Evan O’Neil Kane was the chief surgeon at Kane Summit Hospital in New York City. By the time he was 60, he had been practicing surgery for 37 years and was especially interested in anesthetic. Dr. Kane practiced in the early 20th century, when only general anesthetic was used, meaning the patient had to be completely knocked out. This often resulted in serious complications, as patients were sometimes left paralyzed and on occasion even died. Dr. Kane believed it was possible to operate on patients who only received a local anesthetic, numbing only the smaller area that needed surgery.

He wanted to prove his point, so he found a patient, a person who needed his appendix removed, agreeable to help him experiment. So on Tuesday morning, February 15, 1921, the patient was prepared and rolled into the operating room. Kane had performed more than 4,000 appendectomies, so he easily performed the initial incision and clamped the blood vessels while he located the appendix. He then skillfully removed it as he had done many times before. Through it all, the patient experienced only minor pain. He recuperated quickly and was released from the hospital two days later.

Dr. Kane had done it—a milestone in medical history. But did you know that the surgeon and the patient were one and the same? Dr. Kane operated on himself and removed his own appendix!

Perhaps you’ve heard the proverb, “Physician, heal yourself!” Did you know Jesus spoke these words and actually did heal himself? “Therefore My Father loves Me, because I lay down My life that I may take it again. No one takes it from Me, but I lay it down of Myself. I have power to lay it down, and I have power to take it again. This command I have received from My Father” (John 10:17, 18).

#### ... And Did You Know?

- Albert Einstein was offered the presidency of Israel in 1952, but he refused.
- Al Capone’s business card said he was a used furniture dealer.

## A Clean Record

With rubber gloves, surgical masks, and sterilized instruments, hospital

operating rooms today are the picture of sanitation. But that was not always the case. About 140 years ago, almost 50 percent of patients undergoing major surgery died from infection, due largely to filthy conditions. As the famous saying went, “The operation was a success, but the patient died.” Doctors were bewildered why 80 percent more women died giving birth in hospitals compared to those who had their babies at home. It’s hard to imagine, but back then doctors did not wear a sanitary cap, mask, and gown. They would just wear a bloody apron and go from one patient to the next without ever washing the blood from their hands or instruments. In many cases, patients with minor wounds died from infection or blood poisoning transmitted by the physicians’ breath, dirty hands, and tools!

In the 1860s, a deeply religious English surgeon, Joseph Lister, was disturbed about the staggering number of patients dying from infection. He read in the Bible that God had told the Israelites to wash after any contact with the sick or a dead body—based on this and Louis Pasteur’s discoveries, Lister recognized that germs were the likely source of wound infection.

Thus he suggested that surgeons wash their hands and sterilize their instruments before operating. In addition, Lister insisted that the operating room was kept clean and that the surgeon wore clean clothes. He also developed a method for preventing infection during an operation by treating wounds with an antiseptic. At first Lister was regarded as eccentric, and nurses resented the extra work caused by his obsession with cleanliness. He was also mocked and resisted by his peers.

But Lister, a shy and determined man, was firm in his purpose. He humbly believed God was directing him in this endeavor. In spite of all the opposition he faced, he never gave up. As the mocking went on, everyone began to notice a big change. The deaths from blood poisoning, infection, and gangrene were greatly reduced in Lister’s hospital ward in Glasgow. Eventually, British and American hospitals saw the benefits and adopted the sterile procedures promoted by Dr. Lister.

Before he died, Lister’s services to medicine were recognized, and he was awarded a knighthood. Someone has estimated that roughly a third of the deaths during the Civil War could have been prevented if Dr Lister’s discoveries had been made 10 years sooner. Louis Pasteur described Lister as one of the greatest men of the 19th century. In fact, the terms, “Before Lister” and “After Lister” are used today to describe the age of surgery. Even the common Band-Aid, created by Johnson and Johnson, can be directly traced to

Lister's influence. And as you might have guessed, Listerine mouthwash was not born in the bathroom, but in the operating room and named after Dr. Lister.

It's amazing how the world has been transformed by applying the simple principles of sanitation found in the Bible. But did you know there are many other biblical secrets of health the world is neglecting?

## **Civil War Pivot Man**

In the early afternoon on April 9, 1865, Wilmer McLean stood on the front porch of his two-story brick house. General Robert E. Lee arrived first on horseback that day, accompanied by Colonel Charles Marshall. McLean greeted the two Confederate officers and invited them into his parlor. At about 1:30 p.m., General Ulysses S. Grant arrived, and among his Union officers were Major General George Armstrong Custer and Captain Robert Todd Lincoln, son of President Lincoln.

After about an hour and a half, Generals Lee and Grant finally agreed on the terms of surrender for the Confederate Army of Northern Virginia, which in effect ended the long, bloody Civil War. And while Lee and Grant were conferring, McLean waited outside the house where, we can only surmise, he must have thought about the very strange hand of fate that brought this historic event to his home.

At the outset of the Civil War in 1861, Wilmer was a farmer living in northern Virginia with his family. The beginning of the war had struck very close to his home; in fact, a cannon ball from the first battle landed in the kitchen. So concerned for the safety of his family, Wilmer moved them from the war zone to central Virginia and eventually bought a home at Appomattox Court House. Thus the first battle of the Civil War, known as the Battle of Bull Run, fought on July 21, 1861, took place on Wilmer McLean's farm. So in one of the most unusual twists of fate, the Civil War started in Wilmer McLean's back yard in 1861 and ended in his parlor in 1865.

In similar fashion, the Bible teaches that the last place that Jesus' feet touched the earth when He left will be the first place He places them when He returns.

## **Was There an In-flight Movie?**

In 1982, a 33-year-old truck driver in Los Angeles made national news. Abject boredom prompted Larry Walters to go out and buy 42, 6-foot weather balloons, a huge tank of helium, and some rope. He figured on tying the balloons to his lawn chair, filling them with helium, and gracefully floating up a few hundred feet for an aerial view of the neighborhood. As his neighbors watched, Larry secured his lawn chair to the bumper of his SUV, and one by one he filled the balloons with helium and tied them to his lawn chair. Before liftoff, he provided himself with a two-way radio, a parachute, some jugs of water, a couple of peanut butter and jelly sandwiches, and his BB gun to regulate altitude by shooting out excess balloons. When he was ready, he yelled, "Let's go!" and his neighbors cut the ropes.

But Larry didn't slowly rise 100 feet. He shot straight up so fast that he lost his glasses, climbing more than 1,000 feet per minute. At one point, he climbed to over 16,000 feet! For several hours, Larry drifted in the cold air over the Pacific near the landing pattern of the Los Angeles International Airport. Eventually, a pilot reported that he had passed a man in a lawn chair with a gun, and the control tower told him to report in immediately upon landing, thinking the pilot might be drunk. But other reports and radar confirmed the bizarre UFO was real. After shooting out a couple of balloons, Larry dropped his BB gun. Finally, the airport officials sent up helicopters to rescue him. As he settled down to earth, he was entangled in some power lines but escaped uninjured.

On the ground, Larry found himself surrounded by TV crews, the police, and fire and rescue squads. It was a major event. One of the reporters asked, "What in the world made you do this?" Larry thought about it for a moment and said, "Well, you can't just sit there."

Larry Walters is right; you can't just sit there, but his casual calculations for his historic flight nearly got him killed. The Bible teaches that when Jesus returns, the redeemed will be caught up to meet the Lord in the air. But many sincere Christians are in danger of being deceived because they have miscalculated the nature of this event.

## **Selling the Moon**



In 1967, the United Nations signed the international Outer Space Treaty, which forbids any government from claiming the moon, or any part of space, as their territory. The treaty failed to mention anything about private individuals or corporations, so this left a rather large and exploitable loophole in international law.

In 1980, Dennis Hope, from Gardnerville, Nevada, sent letters to the United Nations, the United States government, and the government of the Soviet Union, informing them that he was officially claiming ownership of all planetary and lunar surfaces in our solar system, aside from the earth, of course. He even gave them the opportunity to respond if they had objections, but as crazy as it sounds, he hasn't heard a word from any of them since.

So for more than 20 years, Hope has been selling land plots on the moon, Mars, and other heavenly bodies for a pretty reasonable price—about \$20 an acre! And he's been pursuing this as not just a novelty sale, but a serious real estate transaction, complete with covenants and bylaws that prevent the unsightly or trivial usage of the property. His sales are accelerating, and within a couple of years, he anticipates he'll have a constituency in the millions—enough to put serious pressure on the UN and the U.S. government to recognize the government of Luna.

In the meantime, Dennis Hope continues to operate his company selling people "official" title to land on the moon. Although others are now in the same business, Hope has earned about \$6.5 million since he began his heavenly real-estate business. That averages out at \$270,000 a year selling land on planets he has never been to and that he does not possess.

Did you know that the Bible teaches there is some heavenly real estate you can truly own? And the price is already paid!

# MECHANICAL MARVELS

## Contents

Phone Advent ● Moveable Type ● Bright Lights, Big City ● Three Gorges Dam ● Speaking of China ... ● Babel Rebuilding ● Boomer Submarines ● As Strange as Fiction ● Space Traveler

## Phone Advent



Prior to 1833, telegraph devices were very impractical, requiring 26 separate wires to send a message—one for each letter of the alphabet. But the esteemed artist Samuel F. B. Morse, known then for his American portraits, was intrigued by communicating long distances using electric impulses. He developed a revolutionary device and a language, called Morse code, that required only one wire!

Later, on May 24, 1844, a telegraphic message based on Morse's work was dispatched over an experimental line from Washington, D.C., to Baltimore. The message, taken from Numbers 23:23: "What hath God wrought!" Soon after, telegraph lines were crisscrossing the country. But what would Samuel Morse think of the mind-boggling volume of information being sent through internet lines today?

For 30 years, Morse code was the most cutting-edge means of communication over long distance. Then in 1872, Joshua Coppersmith was arrested in New York City. He was charged with attempting to extort money from gullible people by convincing them to invest in an instrument that he said would transmit voice over wire. He called it a "telephone." Interestingly, a Boston newspaper reported, "Well-informed people know that it is impossible to transmit the human voice over wire (and) were it possible to do so, the thing



would be of no practical value.”

Of course, within four years, Alexander Bell did send a voice over wire, and he called it a “telephone.” One wonders what that same Boston reporter might have said about something even more seemingly improbable—a telephone that transmits voice without wires. Today there are around 1.6 billion cell phone subscriptions, meaning about half of all the adults in the world have cell phones. It is not uncommon to see people in India or Africa without shoes talking on cell phones. And now with a satellite phone, people can now make a call from virtually any spot on the globe. So with all these phones, what is everyone talking about?

Jesus said every man will give an account for “every idle word [they] may speak, in the day of judgment. For by your words you will be justified, and by your words you will be condemned” (Matthew 12:36, 37).

## **Moveable Type**

Did you know that the technology of moveable type, which made the first printed books such as the Holy Bible possible and affordable, originated in Korea? In the 1100s, Chinese scholars devised a printing system that relied on carved wooden blocks.

Koreans, who shared a border and traded with ancient China, greatly advanced this by inventing the world’s first metal moveable type in the 12th century, some 300 years before Gutenberg printed his first Bible. Koreans still excel today at improving practical developments and inventions.

## **Bright Lights, Big City**

The brightest man-made light on earth emanates from the top of the Luxor hotel, a giant pyramid structure in Las Vegas, Nevada. A total of 45 xenon lights, each one as big as a washing machine and with the brightest bulb available, shoots a powerful blast of radiant light straight up into the sky. The light beaming from the top of this artificial mountain is so bright, astronauts can see it as they fly overhead. Airline pilots are cautioned to avoid the area, as the beam of light can blind them temporarily if they fly through it.

Sadly, this light is totally wasted—it’s not illuminating anything as it blazes into empty space. Did you know there is a story in the Bible that tells of a mountaintop blazing with heavenly light? Even though it is seldom addressed,

this event, called the Mount of Transfiguration, or sometimes the Glorious Mount, is one of the most pivotal moments in the New Testament. This immense experience found in the Gospels of Matthew 16, Mark 9, and Luke 9 is full of profound meaning for Christians, and it helps illuminate many other amazing Bible truths.

## **Three Gorges Dam**

It is the epitome of a monumental project: a dam one-and-a-half miles wide and more than 600-feet high that will create a reservoir hundreds of feet deep and longer than the state of Oregon. Moreover, this one dam's hydropower turbines are expected to create as much electricity as 17 nuclear power plants.

In 1994, the People's Republic of China began the largest construction project in modern history, known as the Three Gorges Dam. At 3,700 miles, the Yangtze is the third longest river in the world. The 15-year project will create the world's largest dam and hydroelectric power plant.

To China, the Three Gorges Dam proves the sleeping dragon has awakened, for it will propel the nation's economy into the 21st century. The project promises significant flood control and safer navigation, and the reservoir will enable 10,000-ton oceangoing freighters to sail up the river directly into the nation's interior for six months of each year, opening a region exploding with agriculture and manufacturing. The Yangtze River has also experienced hundreds of catastrophic floods. A flood in 1998 resulted in 4,000 dead, 14 million left homeless, and \$24 billion in economic loss. The Three Gorges project is estimated to be completed in 2009 at a cost of over \$40 billion.

China's leaders call the dam the greatest engineering feat since the construction of the Great Wall, but to critics worldwide, it is a social and environmental disaster. When the dam is completed, 13 cities, 140 towns, and about 1,300 villages will be submerged by the reservoir. Ancient temples, burial grounds, and hundreds of archeological sites will be lost forever under water. More than 1,600 factories and abandoned mines will be submerged when the dam is completed, and 1.5 million people will have to abandon their homes. Also consider that roughly 360 million people live within the watershed of the Yangtze River. If in the unlikely event the dam breaks, millions of people who live downstream could perish.

You also might be surprised to know that the book of Revelation predicts a dragon will send a great flood to destroy God's church.

## Speaking of China ...



More than 2,000 years old, the Great Wall of China remains one of the most impressive engineering wonders of the world—stretching 1,500 miles, from the mountains of Korea to the Gobi Desert. That's roughly the distance between Miami and Maine.

The Great Wall is actually a series of walls built and rebuilt by different dynasties over a 1,000-year period. It was designed to protect an ancient Chinese empire from marauding tribes in the north. The first section of the Great Wall, the Qin, took 10 years to build at an astonishing rate of about one mile per day! This section of Great Wall was a massive undertaking, equivalent to the building of 30 of the great pyramids of Egypt. It's estimated that for every person building the Qin Wall, six were needed to provide materials, food, and supplies. Three million people, or 70 percent of China's population at the time, were involved in the construction.

The section called the Ming Wall reportedly took 200 years to complete at an estimated cost of \$360 billion, or roughly the amount spent on America's interstate highway system in the last 40 years. At its peak, the Ming Wall contained thousands of individual forts and towers and was guarded by more than a million men. One section of the wall ascends mountain ridges that climb at an angle of 70 degrees and is 7,000 feet above sea level.

The Great Wall averages from 15 to 30 feet high and from 15 to 25 feet wide with about a 13-foot wide roadway on top. But if you took all the bricks from the Ming portion of the wall alone, they would circle the earth at the equator in a wall five feet high and three feet thick!

It's been long rumored that the Great Wall is the only man-made structure that can be seen from the moon. While the Great Wall cannot really be seen

from the moon, it can be faintly seen from the international space station. In fact, in the past decade, scientists have used satellite data to discover more than 600 miles of the Great Wall that have been buried over time.

In 1966, Mao Tse-tung launched the political campaign known as the Cultural Revolution, in which he appealed to the Chinese people to destroy anything associated with traditional culture. Unappreciated for its historic value, the magnificent wall surrounding Beijing and other sections were torn down or cannibalized for material during this period. Modern Chinese now realize the historical value of the Great Wall and are struggling to preserve and rebuild this national treasure.

Did you know that Bible prophecy reports that in the last days God's people rediscover and rebuild lost ancient truth? Isaiah 58:12 says, "And they that shall be of thee shall build the old waste places: thou shalt raise up the foundations of many generations; and thou shalt be called, The repairer of the breach, The restorer of paths to dwell in."

## **Babel Rebuilding**

Scientists in Bulgaria claim they have invented an instant translator that allows people talking on phones in different languages to understand each other. The research team from Rousse, Bulgaria, which also worked out a computer program that translates texts, now claims to have patented the technology that converts words spoken in one language into digital code, which can then be immediately interpreted into another language.

The scientists claim the translator chip can be inserted into any phone. The project leader told national Bulgarian television, "A person can talk freely on the phone in their mother tongue and at the other end of the world people can hear the translation of what they say." The research team said that if investors show an interest in the technology, practical application can begin within a year.

Did you know that the Bible teaches that God has had a patent on this technology for thousands of years?

## **Boomer Submarines**

Nuclear submarines, or "Boomers," are among the most modern engineering wonders in the world. They are the equivalent to a tightly packed,

self-contained city where a crew of 140 shares space equivalent to a three-bedroom house.

The nuclear reactor provides heat energy, which is converted to electricity. This power is used to turn the propeller and send the submarine silently through the water. Because they carry their energy source with them, nuclear submarines are able to travel at least 400,000 miles without refueling.

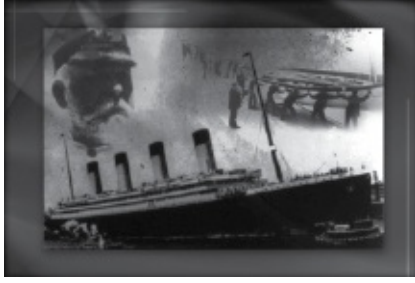
In addition to torpedoes, the new Ohio class of Boomers is equipped with 24 launching tubes holding warheads that may be fired from beneath the water to strike targets sometimes thousands of miles away. Each of these missiles is sufficient to completely obliterate a major city. If God forbid just one sub from each country fired their total nuclear-warhead capacity on the other nation, it would pretty much render life on this planet extinct.

Nuclear subs are deployed for months and can stay submerged for as long as 90 days. The crew has little contact with family during this time; combined with the pressure of being prepared to launch nuclear weapons, this makes it one of the most stressful assignments in the military. To compensate, the Navy trains the best chefs for these subs—yes, chefs. For instance, a meal might consist of prime rib, lobster tails, sautéed mushrooms, baked potatoes, fresh bread, and real chocolate cake with freshly squeezed lemon juice for dessert. And all this is done in an 8-by-10-foot galley that is barely larger than the kitchen in a small apartment! You can understand why submariners are the only fighting force that gains weight during deployment.

The Food Network cable channel has even produced a television show devoted to food served aboard subs, and a cookbook is in the works titled *Deep Comfort: Cooking Secrets From America's Submarines*. In fact, many of these submarine chefs, upon leaving the service, are hired by prestigious restaurants, cruise ships, and even the White House.

They say an army travels on its stomach. That's why the military spends millions of dollars carefully evaluating what their soldiers eat. Then why do many Christians believe that God does not care what His soldiers eat? He does. As Isaiah 55:2 says, "Why do you spend money for what is not bread, And your wages for what does not satisfy? Listen carefully to Me, and eat what is good, And let your soul delight itself in abundance."

## **As Strange as Fiction**



On April 14, 1912, the “unsinkable” *Titanic* was steaming across the Atlantic on her maiden voyage toward New York—trying to break the transatlantic speed record. Yet after striking an iceberg, the ship went down in only a matter of hours. Out of the 2,200 passengers, only 711 were saved. Since then, there have been many books and movies about the *Titanic*.

However, one fictional story written by merchant seaman Morgan Robertson stands out. Robertson’s book was about an unsinkable passenger liner that sank while carrying wealthy elites. The book was titled *The Wreck of the Titan*. Even though the book is fictitious, the events in the story parallel a great deal with the events of the real *Titanic*. Here are a few facts in comparison:

#### TITAN / TITANIC

*Length:* 800 feet / 882 feet

*Width:* 90 feet / 92.5 feet

*Top Speed:* 25 knots / 23 knots

*Watertight compartments:* 19 / 16

*Propellers:* 3 / 3

*Capacity:* 3000 / 3250

*Number of people aboard:* 2000 / 2228

*Lifeboats:* 24 / 20

*Sailing:* in April FROM New York / April 10 TO New York

Both ships were built to be unsinkable. Both were encouraged to break speed records during their voyage. Both ships sank after striking a pyramid-shaped iceberg that had just turned over. Both ships were on their maiden voyage. The most well-to-do and famous people were on both. Only one third of the passengers on each ship survived. Both ships had an inadequate number of lifeboats.

*The Wreck of the Titan* was never published. Each time the editors rejected it, they told him the same thing: The events he wrote of could not possibly happen—the story was too unbelievable. By the way, *The Wreck of the Titan* was written in 1898, 13 years before the *Titanic* was built.

### ... And Did You Know?

- The cruise liner *QE2* moves only six inches for each gallon of diesel that it burns.
- The microwave was invented after a researcher walked by a radar tube and a chocolate bar melted in his pocket.
- “Typewriter” is the longest word that can be made using the letters only on one row of the keyboard.

## Space Traveler



America's first manned space launch vehicle engine produced only 78,000 pounds of thrust—a small inkling compared to the space shuttle's three main engines and two solid rocket boosters that generate some 7.3 million pounds of thrust at liftoff. The energy released is equivalent to the output of 23 Hoover Dams and more powerful than 35 jumbo jets at takeoff.

Strangely, the liquid hydrogen in the space shuttle's main engine is minus 423 degrees Fahrenheit, the second coldest liquid on earth, but when burned with liquid oxygen, the engine's combustion temperature reaches over 6,000 degrees Fahrenheit, two-thirds the temperature of the sun's surface. And the speed of the gases exiting the nozzle is more than 6,000 miles per hour, about five times the speed of sound!

The turbo pump on the space shuttle's main engine is so powerful that it could drain an average family-sized swimming pool in 25 seconds. And after

liftoff it only takes about eight minutes for the space shuttle to accelerate to a speed of more than 17,000 miles per hour. If you could capture two minutes of the heat energy produced by the Shuttle at liftoff and convert it to electric power, it would produce enough kilowatts to supply power for 87,000 homes for a full day.

The shuttle's remote robot arm weighs about 905 pounds on earth, but once in space it can move cargo weighing 66,000 pounds, objects about the size of a Greyhound bus.

During its fiery reentry, the underbelly of the orbiter is protected by about 24,000 heat resistant tiles that must be installed individually by hand. These silicate fiber tiles are incredibly lightweight, about the density of balsa wood and were designed to be used for 100 missions before requiring replacement. Each tile can dissipate heat so quickly that a white-hot tile with a temperature of 2,300 degrees can be taken from an oven and held in bare hands seconds later without injury. (This was the damaged component that caused the destruction of the second shuttle disaster.)

The space shuttle contains all the greatest scientific and engineering skill of modern man. All of the world's greatest technology is represented in this one spaceship. Yet all the power that rockets this craft to the stars is nothing compared to the space vehicle God is designing for the redeemed.



# THE PHENOMENAL HUMAN BODY

## Contents

**Cold Body, Good Grades • Too Good to be True? • Phantom Pain**

### **Cold Body, Good Grades**

In March 1975, an 18-year-old student was submerged in a freezing Michigan pond for 38 minutes. Declared dead at the scene, he was on the way to the morgue when he suddenly gasped for air, causing the transporting vehicle to swiftly divert to the nearest hospital! After nearly two hours of resuscitation efforts, the young man was fully revived. And just two weeks later, he returned to college and continued to be an A student.

In Revelation 3:15, 16, Jesus warns, "I would thou wert cold or hot. So then because thou art lukewarm, and neither cold nor hot, I will spue thee out of my mouth." Yet it appears right now that millions of professed Christians are drowning in a lukewarm swamp of spiritual worldliness, and we are in desperate need of revival!

#### **... .. And Did You Know?**

- **Children grow faster in the spring.**
- **A human brain weighs around three pounds.**
- **You blink over 10 million times a year.**
- **A sneeze travels out of your mouth at more than 100 miles an hour.**
- **Brain waves can be used to run an electric train.**

### **Too Good to be True?**

These "home remedies" are published as interesting facts about everyday products that people claim can handle many everyday problems, but they are not in anyway medically approved for use to cure the ailments listed. Please

## consult with your doctor before trying these home remedies.

- ✔ Drinking two glasses of Gatorade can relieve headache pain almost immediately—without the unpleasant side effects caused by traditional “pain relievers.”
- ✔ Colgate toothpaste makes an excellent salve for burns.
- ✔ Do you have achy muscles? Mix 1 tablespoon of horseradish in a cup of olive oil. Let the mixture sit for 30 minutes, then apply it to the sore areas as a massage oil for instant relief.
- ✔ Sore Throat? Just mix 1/4 cup of vinegar with 1/4 cup of honey and take 1 tablespoon six times a day. The vinegar kills the bacteria.
- ✔ You can cure urinary tract infections with Alka-Seltzer. Just dissolve two tablets in a glass of water and drink it at the onset of the symptoms. Alka-Seltzer begins eliminating urinary tract infections almost instantly—even though the product has never been advertised for this use.
- ✔ Eliminate puffiness under your eyes by carefully rubbing a dab of Preparation H into the skin, avoiding the eyes. The hemorrhoid ointment acts as a vasoconstrictor, relieving the swelling instantly.
- ✔ Cover skin blemishes with a dab of honey and place a band-aid over it. Honey kills the bacteria, keeps the skin sterile, and speeds healing. It can work overnight.
- ✔ Get rid of unsightly toenail fungus by soaking your toes in Listerine mouthwash. The powerful antiseptic leaves your toenails looking healthy again. It can also be used to disinfect a broken blister.
- ✔ To prevent the screws in eyeglasses from loosening, apply a small drop of Maybelline Crystal Clear Nail Polish to the threads of the screws before tightening them.
- ✔ Forget those expensive rust removers. Just saturate an abrasive sponge with Coca-Cola and scrub the rust stain. The phosphoric acid in the Coke is what gets the job done.
- ✔ If menacing bees, wasps, hornets, or yellow jackets get in your home and you can't find the insecticide, try a spray of Formula 409. Insects drop to the ground instantly.
- ✔ To remove a splinter, pour a drop of glue all over the splinter, let dry, and peel the dried glue off the skin. The splinter sticks to the dried glue.
- ✔ Cover boils with Hunt's tomato paste as a compress. The acids from the tomatoes soothe the pain and bring the boil to a head.
- ✔ Get rid of bruises by soaking a cotton ball in white vinegar and applying it to the bruise for one hour. The vinegar reduces the blueness and speeds up the healing process.
- ✔ Dawn dishwashing liquid kills fleas. Add a few drops to your dog's bath and shampoo the animal thoroughly. Rinse well to avoid skin irritations.

- ✓ Next time your dog comes in from the rain, wipe it down with a dryer sheet, instantly making your dog smell springtime fresh.
- ✓ Eliminate your cat's ear mites with a few drops of Wesson corn oil. Massage it in and then clean with a cotton ball. Repeat daily for 3 days. The oil soothes the cat's skin, smothers the mites, and accelerates healing.
- ✓ To prevent troublesome cat hairballs, apply a dollop of Vaseline petroleum jelly to your cat's nose. The cat will lick off the jelly, lubricating any hair in its stomach so it can pass easily through the digestive system.
- ✓ For arthritis pain, mix two cups of Quaker Oats and a cup of water in a bowl and warm in the microwave for one minute, cool slightly, and apply the mixture to your hands for soothing relief.

### ... And Did You Know?

- **Women blink nearly twice as much as men.**
- **The stomach has to produce a new layer of mucus every two weeks; otherwise, it will digest itself.**

## Phantom Pain



Amputees often experience a sensation called “phantom pain.” For example, they might have lost their entire leg, but their toes hurt or their knee itches even though they no longer actually have them. They sense this phantom feeling coming from an absent member and their invisible toes will curl and their imaginary fingers will grasp. Even a nonexistent leg might feel sturdy enough to stand on.

Doctors watch helplessly, unable to treat this part of the body that is screaming for attention even though it no longer exists. In the same way, there are many Christians, new and old, who have confessed and forsaken their sins and applied the blood of Jesus for cleansing, yet still feel the phantom pain of

guilt. Paul says in Hebrews 12:1,2, “Let us lay aside every weight, and the sin which so easily ensnares us, and let us run with endurance the race that is set before us, looking unto Jesus, the author finisher of our faith” (NKJV). To successfully run this race, we are commanded to lay aside not only the sin, but also the weight of guilt that impedes us. The Bible also says, “If we confess our sins, he is faithful and just to forgive us our sins, and to cleanse us from all unrighteousness” (1 John 1:9). That cleansing includes the sin and the phantom pain of guilt.

#### **... And Did You Know?**

- **The tongue is the fastest healing part of a human body.**
- **The average human produces 10,000 gallons of saliva in a lifetime.**
- **Babies are born without kneecaps. They don't appear until a child reaches two years old.**
- **It's impossible to sneeze with your eyes open.**
- **Human eyes are always the same size from birth, but the nose and ears never stop growing.**



## Contents

Debt Facts ● A Vast Wasteland ● White House Snubs ● \$14 Buys a Fortune ● Identity Theft ● Ivy League ● Eat Together, Stay Together ● Junk Food ● Trash Traders ● Let Freedom Ring ● “Love Your Enemies” ● *Left Behind* Pulls Ahead ● Traffic Signals ● Comstock Lode ● Friendly Presidents ● Golden Doorstop ● Lightning That Heals ● Socially Accepted Terrorist, Part 1 ● Socially Accepted Terrorist, Part 1 ● Our Taxes Pay For This?

## Debt Facts



In 1998, people lost \$60 billion in legalized gambling in U.S. casinos; a figure that has increased each year for more than two decades. Over the past 25 years, the United States has been transformed from a nation in which legalized gambling was rare into one in which such activity is common. Today, lotteries have been established in 39 states, with more poised to follow—and all but two have some form of legalized gambling. From cruise ships to riverboats and Western mining towns to Indian casinos and bingo parlors, gambling sites continue to proliferate. Internet gambling is also exploding, enabling an ever-increasing segment of the public to become addicted to gambling without ever leaving home.

Many problem gamblers have divorced their wives, abandoned their children, and turned to drugs. Others have committed suicide after losing their

life savings, retirement, or from drowning in a growing abyss of debt.

## A “Vast Wasteland”



Newton Minow, the then-chairman of the FCC spoke to the National Association of Broadcasters on the topic of the “vast wasteland” on May 9, 1961:

“... I invite you to sit down in front of your television set when your station goes on the air and stay there without a book, magazine, newspaper, profit-and-loss sheet or rating book to distract you—and keep your eyes glued to that set until the station signs off. I can assure you that you will observe a vast wasteland.”

With that in mind, here are some interesting facts about television in America today (Source: Huston and Wright, University of Kansas).

- ✓ 99 percent of homes with electricity have televisions, with an average of 2.4 TV sets per household. (For comparison, each household has an average of 2.5 people!)
- ✓ As of 2001, 60 percent of teens, 48 percent of schoolchildren, and 24 percent of toddlers have “their own” TV sets.
- ✓ 91 percent of TV homes have at least one VCR, and as of 2001, 6 million videotapes are rented daily!
- ✓ The average TV viewer has access to 75 channels, and some have more than 200!
- ✓ In the average home, the TV is on up to 8 hours a day—with teens

watching 3 hours a day. Women over 18 watch 5 hours a day—at this rate, that's 9 years of TV if they lived to be 75 years old!

- ✓ Children spend more time watching television than in any other activity except sleep.

## White House Snubs

In 1962, the President of the United States, John F. Kennedy, held a state dinner to honor American winners of the Nobel Prize. Among the invitees was writer William Faulkner—who declined! He said the 100-mile trip to Washington “was too far to go for dinner with someone I didn’t know.”

Ten years later, Ralph J. Perk, then the mayor of Cleveland, Ohio, showed up for a White House dinner with President Richard Nixon. Perk’s wife, Lucille, chose not come with him—because it was her bowling night!

### ... And Did You Know?

- After the “Popeye” comic strip started in 1931, spinach consumption went up by 33 percent in the U.S.
- The IRS employees tax manual has instructions for collecting taxes after a nuclear war.
- Four percent of the U.S population is vegetarian.

## \$14 Buys a Fortune

A brooch purchased for \$14 at a Rhode Island antique shop turned out to be priceless! An antique dealer found the 19th century ornamental pin while rummaging through a basket of otherwise cheap costume jewelry. After close examination, it was found to be made of 18-karat gold and includes three small rose-cut diamonds.

But most notably, the brooch features two extraordinarily rare pearls, which experts say are all-natural, purple, and produced from a type of very rare clam known as quahogs. The larger of the two pearls is about the size of a

marble, and its value alone may exceed several million dollars! It was nicknamed the Pearl of Venus and has been featured on many nationwide tours.

Jesus said, “The kingdom of heaven is like unto a merchant man, seeking goodly pearls: Who, when he had found one pearl of great price, went and sold all that he had, and bought it” (Matthew 13:45, 46).

## **Identity Theft**

Identity theft is a growing crime in America. It happens when someone wrongfully obtains and uses another’s personal data for fraud or deception, typically for economic gain. Unlike your fingerprints, your personal data—especially your Social Security number, bank account or credit card number, or telephone calling card PIN—can be terribly abused if they fall into the wrong hands, profiting others at your expense. Every day, hundreds, if not thousands, of people across the country report funds stolen from their accounts. In the worst cases, criminals completely take over victims’ identities, run up vast debts and commit crimes, leaving the victims with destroyed credit and a criminal record that takes years to correct.

Did you know that the devil tried to steal your identity, leaving you in debt and with a criminal record beyond your means to repay? The Bible says, “For as he thinks in his heart, so is he” (Proverbs 23:7 NKJV). It’s true! What you think about yourself has a great impact on how you behave.

## **Ivy League**

Harvard, the first college in North America, was established in 1636 for “Christ and the Church.” The minister who founded the school, John Harvard, said: “Let every student be plainly instructed and earnestly pressed to consider well the main ends of his life and studies; to know God and Jesus Christ.” It’s no wonder then that 52 percent of 17th-century Harvard graduates became ministers! In fact, virtually every other Ivy League school such as Yale and Princeton was also established primarily to train ministers of the gospel and evangelize.

Sadly, today you will scarcely hear the name of God on the campuses of these great institutions except in cursing.



## **Eat Together, Stay Together**

A recent survey indicates that nearly 75 percent of those polled say that eating together as a family is very important, but only 43 percent actually do. That's terrible considering that families who eat together experience the following benefits: Children do better in school, have fewer behavior problems, understand their family's values more deeply, are less apt to try alcohol or drugs, communicate more, and are healthier.

### **... And Did You Know?**

- **Forty percent of women have hurled footwear at a man.**
- **About half of all bank robberies take place on Fridays.**
- **Nearly 55 percent of motorbike accidents happen on the weekend.**
- **Almost 10 percent of Americans report to have been in the presence of a ghost.**
- **There are 293 ways to make change for a dollar.**
- **Until the 1960s, men with long hair were not allowed to enter Disneyland.**
- **In New Mexico, over 11,000 people have visited a tortilla chip that is claimed to have the face of Jesus burned into it.**
- **There is no "Betty Rubble" in the Flintstones Chewables Vitamins.**

## **Junk Food**

In America, the food industry spends more than \$33 billion a year to advertise "junk food." The American Cancer Center spends \$1 million a year to encourage people to eat fruits and vegetables (Source: Media Awareness Network).

And approximately 325,000 people in the country are hospitalized with food poisoning every year. About 5,000 of these cases result in death.

## **Trash Traders**

Many U.S. states trade and sell in trash! In fact, in 1996, Pennsylvania imported more trash for its landfills than what it produced on its own. Nearly 6.7 million tons of Pennsylvania garbage went to landfills from its citizens, but the state imported 7.9 million tons of trash from other states and countries.

## Let Freedom Ring



The Liberty Bell, sometimes called the Bell of the Revolution or Old Independence, has been an enduring symbol of American patriotism ... but it had a rough beginning.

Originally cast in London in 1752 and weighing more than 2,000 pounds, the Liberty Bell arrived in Philadelphia in August, but it cracked during its first test ringing. It was then melted down in Philadelphia, and recast to make a second bell in June 1753. Unfortunately, this new bell was deemed to have poor tone—thought to have been caused by too much copper—so it was melted down again the same year and recast to make the third and final bell.

This is the celebrated Liberty Bell that exists today, which is made mostly of copper and tin with small amounts of lead, zinc, arsenic, gold, and silver. It hangs from what is believed to be its original yoke, made from 200 pounds of American elm. When struck, the bell sounds the note of E flat.

The bell was rung on July 8, 1776, to announce the signing of the Declaration of Independence, proclaiming America's freedom. During the Revolutionary War, the bell was placed on a wagon, moved 60 miles west to Allentown, and hidden in the floorboards of the Zion Reformed Church—all in an effort to keep it from falling into British hands, who would have no doubt melted it down to make cannons.

After the war, it was rung every July 4 until sometime around 1835—when it cracked again. No one knows exactly when the Liberty Bell cracked the

second time; it is a mystery of history. Today, the 250-year old icon is a popular attraction in Philadelphia and is only rung on special occasions.

Did you know that the bell was first called the Liberty Bell, not by patriots of the revolution, but by the abolitionists fighting slavery? They chose this name because of the Bible inscription on the bell from Leviticus 25:1 that reads, “Proclaim LIBERTY throughout all the Land unto all the inhabitants thereof” (emphasis added). In retrospect, it was a remarkably apt metaphor for a country that was literally split over slavery. Jesus said that whoever commits sin is a slave of sin. So how much does real liberty cost?

### “Love Your Enemies”

After the first day of fierce fighting in the Civil War battle of Fredericksburg, hundreds of Union soldiers lay wounded and bleeding on the battlefield, crying out for help. All through the night, and most of the next day, artillery fire prevented their relief. Hour after hour, their agonized cries of “Water! Water!” were heard behind their enemy’s line.

At last, however, a noble Southern soldier, Sergeant Richard Kirkland, rose above his love of life and told his general, “I can’t stand this any longer! Those poor souls out there have been praying and crying all night and all day, and it’s more than I can bear! I ask your permission to go and give them water.”

The general answered, “But you know that as soon as you show yourself to the enemy, you will be shot?”

“Yes, sir. I know it,” answered the compassionate soldier. “But to carry a little comfort to those poor dying men, I’m willing to run the risk!”

The general hesitated, but his heart was also touched with sympathy. “Kirkland, it’s sending you to your death, but I cannot oppose such a motive. I hope God will protect you. Go.”

So the brave soldier, furnished with a supply of water, stepped over the stone rampart and began his work of Christlike mercy. Wondering eyes beheld him as he knelt by the nearest sufferer, tenderly raised his head, and held the refreshing cup to his parched lips. Every soldier in the Union line understood the tender mission of the man in gray, and not a single shot was fired. For over an hour, one after another of the crying, wounded, and dying was given refreshing drink, had his cramped or mangled limbs straightened, his head cushioned on his knapsack, and was covered with his coat or blanket as tenderly as though by his own mother.

So also is it on life's great battlefield, where souls are crying and dying from the fearful effects of sin. They are thirsty for the Water of Life, with none to reach out to them the refreshing drink they so crave, except the One who stepped over the ramparts of heaven ... coming down to risk His all on the cross.

## **Left Behind Pulls Ahead**

According to CBS News, more than 58 million prints of the *Left Behind* book series are in circulation, not including spin-off publications. Total annual revenue for the series, including the books, movies, audio recordings, and children's merchandising is \$100 million.

### **... And Did You Know?**

- **All 50 states are listed across the top of the Lincoln Memorial on the back of the \$5 bill.**
- **Over their lifespan, an American will spend an average of 6 months waiting at red lights.**
- **Maine is the only state whose name is just one syllable.**
- **About seven percent of Americans think Elvis is still alive.**
- **Ohio is listed as the 17th state, but technically it is number 47. Until August 7, 1953, Congress never voted on a resolution to admit Ohio to the Union.**
- **In one survey, 52 percent of Americans said they'd rather spend a week in jail than be President.**
- **The state of Maine has 62 lighthouses.**

## **Traffic Signals**

Until the end of the 19th century, traffic in large cities was largely uncontrolled chaos. Carriages and wagons dashed about in every direction, and the danger of frequent runaway horses added to the madness. Getting across a busy street could be a life-and-death challenge. In the 1860s, the

NYPD formed the famous “Broadway Squad.” These officers were the largest men in the department, with a minimum height of six feet; their primary duty was simply to escort pedestrians safely across the bedlam of Broadway!

In the 1890s, the traffic pandemonium in New York increased with the bicycle craze. This inspired Police Commissioner Theodore Roosevelt to organize a police bicycle squad—nicknamed the “Scorcher Squad”—to control bicycle speed demons who were constantly breaking the 8 mph speed limit.

Then with the advent of automobiles, it became even more difficult to negotiate the thunderous maze of people, horses, carriages, bicycles, and autos on streets that were often unpaved, muddy, or dusty! The early cars frequently broke down, clogging the busy streets, and it was not uncommon to see traffic disputes settled by drivers fist fighting. It soon became apparent that some method to regulate traffic was an absolute necessity.

Most cities only had police directing traffic, which was among the most dangerous assignments. Scores were injured or killed and many died from illness through constant exposure to weather extremes ... not to mention the daily breathing in of the brew of dust, manure, and choking auto exhaust. Some cities tried a confusing system of train signals to regulate traffic. London even had gas-powered lamps, but they just blew up.

Then in 1912, Lester Wire, a detective on the Salt Lake City police force, thought of the words of Jesus in Matthew 5:15: “Nor do men light a lamp and put it under a basket, but on a lampstand, and it gives light to all.” This inspired Lester to invent one of the world’s first electric traffic lights: a wooden box with red and green colored lights, up on a pole where cars could see it. Soon the idea spread to other cities where it was improved and refined. Think of how many lives have been saved by the simple application of Scripture!

## **Comstock Lode**

In 1859, as the California gold rush began to fade, a few prospectors wandered into western Nevada following rumors of gold in the Washoe Mountains. Two miners, Pat McLaughlin and Peter O’Reilly, did find some gold and staked a claim at the head of Six-Mile Canyon. Another clever miner, Henry Comstock, stumbled upon their find and claimed it was on his property, convincing the others to give him a share of the stake. Soon fortune seekers everywhere heard the news and the surrounding hills were sprinkled with gold mines.

The biggest problem in this prospecting paradise was the sticky bluish mud surrounding the gold. It piled up everywhere around their mines, sticking to their boots and clinging to picks and shovels. They called it that “blasted blue stuff,” which made their gold mining a miserable business. Eventually, a perceptive miner had the blue mud tested, and it was found to be some of the richest silver ore ever discovered, worth more than \$2,000 a ton in 1859! These miners were knee deep in one of the greatest single mineral strikes in history. The fabulous strike was the richest known U.S. silver deposit and became known as the legendary Comstock Lode. And the blue mud was about to change history.

By 1864, the staggering amounts of silver and gold coming out of the mine reached the attention of President Lincoln, who needed the riches of the Comstock Lode to help win the Civil War. In addition, Lincoln needed the votes of another state to pass the 13th Amendment, which was drafted to abolish slavery. So even though Nevada was too sparsely populated for statehood, the entire Nevada constitution was telegraphed to Chicago, where it was written out in longhand and delivered to Washington, D.C. It was the longest telegraph message in history, taking Frank Bell more than 12 hours to tap it out at a cost of more than \$4,000 to send! Because of blue mud, Nevada became a state on October 31, 1864, helping the North win the Civil War and abolish slavery.

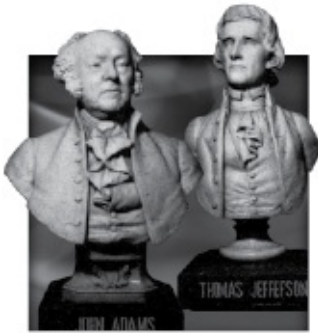
Sometimes great riches are right under our boots and we don't recognize it.

#### ... And Did You Know?

- **San Francisco cable cars are the only mobile national monuments.**
- **The Hawaiian alphabet has only 12 letters.**
- **Americans eat 18 acres of pizza every day.**
- **An area in West Virginia is commonly referred to as Big Ugly.**
- **Alaska is the most eastern and western state.**
- **On his way home to visit his parents, a Harvard student fell between two railroad cars at the station in Jersey City, New Jersey, and was rescued by an actor on his way to visit his sister in Philadelphia. The student was Robert Lincoln, heading for 1600 Pennsylvania Avenue. The actor was Edwin Booth, the brother of the man who a few weeks later would murder**

the student's father.

## Friendly Presidents



The second and third U.S. Presidents, John Adams and Thomas Jefferson, were good friends in their youth, but after Adams was replaced by Jefferson in the White House, political disagreements separated them and they never saw each other again.

They were eventually reconciled in the last 14 years of their lives and exchanged many affectionate letters. When John Adams died at the ripe age of 91, his last words were, “Thomas Jefferson still lives.” But this was incorrect. You see, at the age of 83—during his last hours in his home in Monticello, Virginia—Jefferson passed in and out of consciousness. In 1826, just a few hours before Adams died, Thomas Jefferson died surrounded by friends and family. His last words were, “Is it the 4th?” After he heard, “Yes,” he breathed his last. Amazingly, the final words of these two Founding Fathers were uttered on the same day, July 4—and on the 50th anniversary of the Declaration of Independence. They were two of the last three surviving signers of that historic document.

Did you know the day of Jesus’ death also coincided perfectly with the Jewish independence day?

## Golden Doorstop

When most people think of the discovery of gold in North America, they think of 1849 and the California gold rush. But the first big discovery of gold in North America happened in North Carolina in 1799. A 12-year-old named

Conrad Reed was playing hooky from church to go fishing in a creek on his father's farm when he spotted an interesting black rock in the creek. He lugged the 17-pound rock home, which, because of its heavy weight, the family used as a doorstop for three years. What they didn't know was that the piece of rock was actually a giant gold nugget!

Then in 1802, the Reeds sold it to an eagle-eyed, perhaps unscrupulous jeweler for a mere \$3.50. Of course, the gold was actually worth a thousand times that modest sum. How sad the Reed family must have been when they discovered they had been tripping over a treasure for three years.

The Bible teaches that millions of other people are still tripping over a priceless jewel every day, unaware of the riches within their reach. In Matthew 21:42, Jesus says, "Have you never read in the Scriptures: 'The stone which the builders rejected Has become the chief cornerstone. This was the Lord's doing, And it is marvelous in our eyes?'"

#### ... And Did You Know?

- There are 119 grooves on the edge of a quarter.
- About 18 percent of animal owners share their beds with their pets.
- Alaska has more caribou than people.
- The average American will eat 35,000 cookies during his/her lifetime.
- About half of all Americans are on a diet on any given day.
- There are more than 30,000 diets on public record.
- The spray WD-40 got its name because it took 40 attempts to create the "water displacing" substance.

## Lightning That Heals

Many years ago, the Swamp United Church of Christ in Ephrata, Pennsylvania, celebrated the appearance of a strange lightning bolt. According to Evangelical Press news service, it seems that when circuit-riding preacher John Waldschmidt died in 1786, his wife became demented and deaf.

However, during a church service six years later, lightning struck the cemetery outside. Upon investigation, say church records, the shocked



congregation discovered that the bolt had split Waldschmidt's tombstone in two—and that the widow was healed the same instant.

### ... And Did You Know?

- The \$200 billion budget of the U.S. Department of Health, Education, and Welfare is larger than the combined operating expenses of all the governments of the 50 U.S. states combined.
- When Spain declared war on America in 1898, the government in turn declared war on Spain ... but backdated the declaration by three days so it would look more heroic to have declared war first.
- John Hanson, not George Washington, was the first president of the United States. When the Congress met in 1781, America was governed by the Articles of Confederation, which were adopted in 1777 and ratified by the states in 1781. At that meeting, Congress elected John Hanson its “President of the U.S. in Congress assembled.” George Washington became the first president under the U.S. Constitution in 1789.
- Alaska has the highest percentage of people that walk to work.

## Socially Accepted Terrorist, Part 1

In the next 24 hours, a ruthless terrorist will be responsible for nearly half of all the homicides in North America; half of all the people who die on the highways; half of all the people who are admitted to the hospital; half of all the people who are incarcerated in jail; and half of all the people who are involved in domestic violence. His chemical attack will also cause half of all the nation's birth defects.

Sadly, the government is looking the other way because this terrorist is paying them hush money. Worse still, even many professed Christians are defending and harboring this cold-hearted killer.

Who is this deadly villain who is devastating our homes and nation? Alcohol.

## Socially Accepted Terrorist, Part 2

Several factories based in North America are producing and selling weapons of mass destruction—that is, tobacco and the lethal habit of cigarette smoking. And the saddest part is that this deadly and expensive international health hazard is easily preventable.

Every year, 4 million people die worldwide from smoking-related diseases—approximately one person every 8 seconds. And every minute, 10 million cigarettes are sold worldwide—that’s 15 billion every day. Smoking costs the United States more than \$150 billion each year in health care costs, including \$81 billion in productivity losses and over \$75 billion in excess medical expenditures. In addition, smoking is directly responsible for 87 percent of lung cancer victims and causes most cases of emphysema and chronic bronchitis. Smoking is also a major factor in coronary heart disease and stroke, and it has been linked to a variety of other health disorders, including infertility and peptic ulcers. Smoking during pregnancy accounts for an estimated 20 to 30 percent of low-birth weight babies, and some 10 percent of all infant deaths.

Even with all this knowledge, it’s thought that one out of five teens between 13 to 15 smokes. Evidence also indicates that half of the people who start smoking as adolescents will go on to smoke for 15 to 20 years, and tobacco companies continue to invest millions of dollars in effective advertising to encourage young people to begin a lifelong addiction to their products.

Cigarettes contain at least 69 distinct cancer-causing chemicals, one of which is hydrogen cyanide ... found both in mainstream and secondhand smoke. It is extremely toxic and was used in World War II as a genocidal agent. Reports also indicate that Saddam Hussein may have used the substance against the Kurds in the 1980s.

Still, the tobacco companies in America continue to manufacture and use these weapons of mass destruction. The greatest irony is that tobacco companies outwardly discourage people from smoking on one hand, while they continue to profit from peddling their deadly poison on the other. They are very much talking from both sides of their mouth.

Jesus addressed this behavior when He said, “This people draws near to Me with their mouth, and honors Me with their lips, but their heart is far from Me” (Matthew 15:7, 8).

**Our Taxes Pay For This?**

Representative Tom Moore sponsored a resolution in the Texas House of Representatives to commend Albert de Salvo for his unselfish service to “his country, his state and his community.” The resolution stated, “This compassionate gentleman’s dedication and devotion to his work has enabled the weak and the lonely throughout the nation to achieve and maintain a new degree of concern for their future. He has been officially recognized by the state of Massachusetts for his noted activities and unconventional techniques involving population control and applied psychology.” The resolution was passed unanimously. Representative Moore then revealed that he had only tabled the motion to show how the legislature passes bills and resolutions often without reading them or understanding what they say. Albert de Salvo was the Boston Strangler.



## Contents

**Enigma Machines • Hungry in China • A Long Run • A Poor Sport • Axis and Allies • Carnal Minded • Guarding a Dead Rosebush • Buried Alive • A King's Ransom • The Queen Mary • Stalingrad**

### Enigma Machines

In World War II, the German army effectively used modified Enigma machines to communicate details of planned attacks on the Allies. Enigma machines relied on complex encrypted codes to make it nearly impossible for anyone without the codes to crack a message, even with another Enigma machine!

But in 1941, the British destroyer *HMS Bulldog* captured a German U-boat that had not only an Enigma, but also all the needed codes currently used by the Nazis. It is believed that this event shortened the war by many years and saved thousands of lives.

### Hungry in China

The largest famine in human history was the Great Famine of China. It is estimated that between 1959 and 1961, some 30 million people starved to death. During this time, the people made "bread" from a kind of edible earth. But this substance was devoid of any nutrients, so those who ate the loaves had a temporary sensation of satisfaction, yet died of malnutrition.

It is a stark reminder that so many are trying to find religious fulfillment in faiths that have no truth in them.

### A Long Run

The marathon race derives its name from the town of Marathon, Greece, where legend has it that a hometown runner carried news to Athens of Greece's victory over the Persians.

This long footrace of more than 26 miles requires extraordinary physical endurance and extreme mental toughness. The current record is just shy of 2 hours and 5 minutes—under five minutes per mile!

Christians are nearing the end of a marathon race to help rescue the world. We need to be spiritually tough and fleet-of-foot to do all we can to cross the finish line as victors!

### ... And Did You Know?

- India has a Bill of Rights for cows.
- Coconuts kill more people in the world than sharks—approximately 150 people.

## A Poor Sport



Ancient Roman coliseums hosted brutal blood sports in which slaves, trained to be fierce fighters called gladiators, would battle one another to the death. Julius Caesar ordered large-scale exhibitions with 300 pairs of combatants on one occasion. But the Emperor Trajan gave the largest contest of gladiators as part of a victory celebration in A.D. 107. It featured a staggering 5,000 pairs of fighters!

And sometimes, to provide spectators a little more “entertainment thrill,” hungry wild animals were released into the mix. The gladiators would then have to battle one another and the fanged creatures. Despite near-impossible odds, these slaves fought fiercely because they had a glimmer of hope: If they could survive the assaults of their fellow gladiators and wild animals, the emperor just might release them. The goal was simply to be the one left standing.

### ... And Did You Know?

- On November 29, 2000, Pope John Paul II was named an Honorary Harlem Globetrotter.
- On average, a human being will spend two weeks kissing in his/her lifetime.

## Axis and Allies

During World War II, resistance fighters in France believed the Nazi occupation was temporary. These brave men and women fought hard and suffered torture when captured, but they continued their campaign relentlessly against terrible odds, spurred on by the faith that someday soon Allied forces would arrive and deliver France from its cruel oppressors.

But as days turned into weeks, and then months into years, some fighters grew weary of their life of constant resistance and hiding. For many, it began to seem that the Allies would never come—that they were too busy fighting the Nazis on other fronts. It even looked as though France would forever be under the control of the enemy.

In time, a few freedom fighters found that it was much easier to cooperate with the Germans. They even began to make friends with their oppressors and to betray their fellow Frenchmen in exchange for favors and position. Then, suddenly, came D-Day. France was liberated, and the freedom fighters who endured to the end were heroes, and the traitors who capitulated were publicly humiliated and even killed.

Could it be that final events in the Church will closely resemble those in France during World War II?

## Carnal Minded

You might be surprised to learn that the word “carnival” comes from the Latin word “carne,” which means flesh. The story behind it dates back to about A.D. 400, when the great Coliseum of Rome was often packed with wild spectators who had come to view violent games. The bloody entertainment consisted of watching human beings and wild beasts battle one another until one or the other was killed. The assembled multitude reveled in such sport and

roared with delight when a person was slain.

On one such a day, when the vast crowd was watching the gladiatorial show in the great arena, a Syrian monk by the name of Telemachus stood up. He was deeply grieved and outraged by the utter disregard for human life, and so he leaped into the arena in the midst of the butchery and boldly cried out, "This thing is not right! This thing must stop!" Because he was interfering with their entertainment, the emperor of Rome commanded that Telemachus be run through with a sword. Thus the monk died.

But through his death, he kindled a flame in the hearts of thinking persons. History records that because of his courageous sacrifice, within a few months the gladiatorial combats began to decline and soon ceased altogether. Why? Because one man dared to boldly speak out against the evil carnage.

The Bible says there is a battle in every person's heart between the carnal mind and the Spirit. What will win you heart's battle?

#### ... And Did You Know?

- The average person uses 150 gallons of water a day for personal use.
- You share your birthday with a least 9 million other people in the world.
- The average person makes about 1,140 telephone calls each year.

## Guarding a Dead Rosebush

Years ago in the old Russian Empire, the ruling Czar Nicholas II was strolling through his vast palace gardens when he came upon a lonely guard standing at attention in a secluded corner of the great meandering gardens. "What are you guarding?" asked the inquisitive ruler.

"To tell you the truth, Great Sovereign," replied the sentry, "I have no idea. However, the captain of the guard ordered me to this post."

Czar Nicholas then summoned the captain, who replied, "Great Sovereign, there are very clear written regulations specifying that a guard be assigned to that precise corner at all times, and this has always been done as long as I can remember."

The curious Czar then ordered a search to find out why. The palace archives finally yielded the answer: Years before, Catherine the Great had planted a special rose bush in that corner and she had firmly ordered a sentry

to be posted there to guard it so nothing might disturb or damage it. And a hundred years later, even though the rose bush had died long before, sentries were still guarding the barren corner of dirt, even though they had no idea why!

Traditions of faith can be very beautiful experiences, useful in preserving valued ideals handed down by family and culture. However, we should be wise in what we spend our time guarding! Many religions zealously defend traditions and rituals even though they do not know what they mean or where they came from—guarding barren ground. Jesus clearly warned that if any traditions or customs conflict with the commandments of God, they should be discarded. “And in vain they worship Me, Teaching as doctrines the commandments of men. For laying aside the commandment of God, you hold the tradition of men” (Mark 7:7, 8).

## **Buried Alive**

On September 29, 2000, a 46-year-old Romanian from the small village of Braila was placed in his coffin. At the funeral home, grieving family and friends filed past the open casket to pay their last respects. However, before he could be buried, Ionel Olteanu “sprang to life” and walked back home. Neighbors were shocked to see Olteanu strolling the streets of the village—many fell to their knees and started praying. Doctors who had certified Olteanu dead aren’t sure what really happened, but they speculate that he might have fallen into a temporary diabetic coma.

Did you know history is littered with frightening examples of people buried alive, accidentally and deliberately? In 1896, T.M. Montgomery, who supervised the moving of all the remains at the Fort Randall Cemetery, reported, “Nearly two percent of those exhumed appeared to be victims of suspended animation.”

On the island of Iona, in the sixth century, one of St. Columbia’s monks was dug up the day after his burial and found to be alive. Legend has it that when Oran told his fellows he had seen heaven and hell, he was promptly executed and re-interred on grounds of heresy.

And in the late 16th century, the body of Matthew Wall was being lowered to his grave in Braughing, England, when one of the pallbearers tripped, causing the others to drop the coffin, reviving the dear departed. Wall lived on for several more years, dying in 1595. He celebrated his “resurrection” every

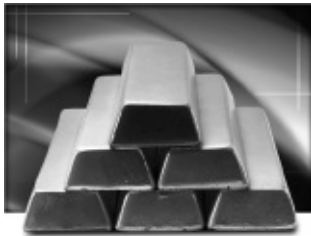


year.

In the early 17th century, Marjorie Elphinstone died and was buried in Ardtannies, Scotland. When grave robbers attempted to steal the jewelry off her body, the deceased scared the daylights out of them by groaning. The terrified robbers fled for their lives, and Marjorie revived, walked home, and outlived her husband by six years.

The Bible addresses another kind of premature burial that happens every day—when people are baptized before they have really surrendered their bad habits to Christ.

## A King's Ransom



In 1532, Francisco Pizarro and 160 of his men entered the heart of the Inca Empire in search of gold. The Conquistadors eventually found their way into the presence of the young Inca king Atahualpa. A Spanish friar traveling with Pizarro then told the Inca monarch that his people must renounce their gods. When Atahualpa asked them upon what authority they made this demand, the Catholic handed him a Bible. Atahualpa held the book next to his ear, trying to listen to its pages. At last he asked, “Why doesn’t the book say anything to me?” and he threw it violently to the ground. The Spanish used this insult as an excuse to attack and massacre the crowds of unarmed people and arrest the handsome king.

It is astonishing to realize how a small army like Pizarro’s—with only 62 horsemen and 102 infantry—attacked and conquered an empire of at least 5 million. But he had the latest technology in deadly weapons. Guns, mechanical crossbows, and horses terrified the natives.

But King Atahualpa, believing that the Spanish really only wanted gold, came up with a plan to free himself. He told Pizarro he would give for his release enough gold and silver vessels to fill three large rooms. The Spaniards thought such an amount was impossible, but the gold-hungry Pizarro agreed.

So Atahualpa decreed that his realm be ransacked to fill one 18-by-22-foot

room with gold, stacked to a height more than eight feet. In addition, two equal-sized rooms were filled with silver. By July 1533, more than 24 tons of exquisite treasure had been collected, worth at least \$267 million today. Yet the Spaniards did not honor their promise. They kept Atahualpa imprisoned for another year and then killed him.

How sad that the largest ransom ever paid for a man's freedom was in vain! Sadder still, there are millions of people who have had a king's ransom paid for their freedom and they choose to remain in prison!

## The Queen Mary

Built in the early 1930s, the *Queen Mary* was the largest ship in the world in her time—even surpassing the *Titanic* in almost every way. For many years, she had a rich history of transporting passengers with more than 1,000 transatlantic crossings.

Then during World War II, the great lady became instrumental in saving lives. She shuttled thousands of wounded soldiers returning to the United States and even carried up to 15,000 troops at one time. Servicing the war effort, the *Queen Mary* traveled more than 600,000 miles and carried over 800,000 troops. One historic journey to New York in May of 1943 included the passenger Winston Churchill and 5,000 German POWs.

In 1967, the city of Long Beach, CA, purchased the *Queen Mary* from Cunard Lines. Since then, \$63 million has been spent on its conversion into a tourist spot with shops, restaurants, and a hotel. Now many in Long Beach look upon the giant ship, docked on the oceanfront and dominating the view, as a floating white elephant. Voices are calling for the old liner to be scrapped.

With no possibility of sailing the seas, they claim the *Queen Mary* serves as false advertising; calling it a ship is really a misnomer. Even though it has a bow, stern, bridge and all the features of a great ship, it has no destination. Like many churches today, it is a large floating museum—a resort filled with activity that never leaves port.

## Stalingrad

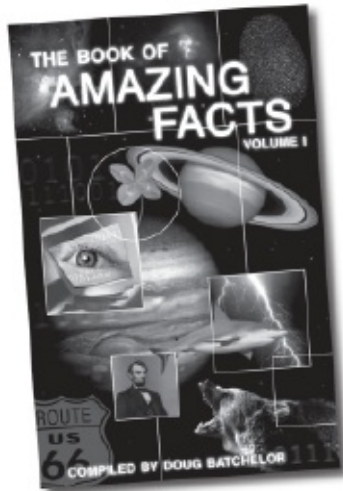
In 1943 during World War II, the Russian military defending Stalingrad managed to surround Hitler's sixth army—the besieged became the besiegers. In addition to a fierce bombing campaign, the Russians placed powerful

loudspeakers within the listening range of German soldiers. An array of sound tricks was adopted, such as the “monotonous ticking of a clock” followed by a voice saying, “A German dies every seven seconds on the Eastern Front.” The propaganda voice then intoned, “Stalingrad, mass grave of Hitler’s army!” and then tango dance music would start blaring across the empty frozen wasteland. Demoralized and starved, 91,000 German soldiers eventually surrendered.

**... And Finally!**

- **In a year, the average person walks four miles making his or her bed.**
- **In the last 4,000 years, no new animals have been domesticated.**
- **In England, the Speaker of the House is not allowed to speak.**
- **About 11 percent of the people in the world are left-handed.**
- **Until the 19th century, solid blocks of tea were used as money in Siberia.**
- **February 1865 is the only month in recorded history not to have a full moon.**
- **The average person spends about two years on the phone in a lifetime.**

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