

CREATOR

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AQUATIC CREATION

As the deer pants for streams of water, so my soul pants for You, O God. My soul thirsts for God, for the living God (Psalm 42:1-2a).

It has no shape of its own, yet it can appear in three different forms. In its pure state, it lacks color and taste, yet without it we could see and taste nothing. In an open container it will eventually disappear, but it is found everywhere on Earth. With it, the Lord Jesus Christ has created mighty oceans, ravaging storms, beautiful crystals, and life. It is **water**—the powerful and versatile tool of our Creator.

Without water, life as we know it would not exist. Our senses, thoughts, emotions, and physical appearance are all dependent on this liquid. Blood, muscles, and skin are largely made of water. Humans can scarcely survive a week without it.

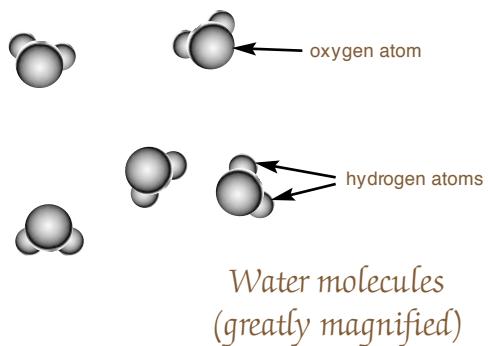
God forged a molecule of water from two atoms of hydrogen and one atom of oxygen, and He made it tiny. **Eighteen billion** water molecules, lined up in a row, are needed to equal one inch (2.5 centimeters)!¹ Jesus uses their small size to penetrate every fiber of life and most of the physical world around us.

God gave each water molecule a V-shape. This makes it **polar**, which means water is strongly attracted to itself and most other molecules.

Like a group of excited children clamoring around a bowl of candy, water molecules quickly surround just about any substance placed into its liquidy world. This is why a great number of things can be dissolved in water. In fact, **more substances can be dissolved in water than any other known liquid.**²

If we analyzed a cubic mile (four cubic kilometers) of sea water, we would find that it contained over four million tons of sulfur, almost two million tons of calcium, 235 tons of iodine, and 47 tons each of iron and aluminum. We would also find 14 tons of copper, 14 tons of arsenic, one and a half tons of silver, and 38 pounds (17 kilograms) of gold, and many other substances.³

Because water molecules are greatly attracted to each other, water possesses another special property—**surface tension**. Have you ever seen water bugs scurrying across the surface of a pond? Why don't they sink? Water is able to stick to itself and create a type of film on its surface, where air and water meet. This film, or surface



tension, helps keep light-weight objects—like pond insects—from falling through, even though the insects are billions of times heavier than individual water molecules. It's not unlike a group of super-strong children who are able to prevent really enormous giants from breaking through a Red-Rover line. Boy, these “kids” are tough!

Another special property of water is that it both *heats up and cools down slowly*. Earth is the only planet in the solar system where water exists in all three of its forms: a gas (water vapor or steam), a liquid, and a solid (ice). About three-quarters of the earth's surface is covered by liquid water and it's no accident that God the Father made it this way. In His infinite love, He keeps the temperature of our surroundings relatively constant from night to day and from season to season, using water.

Like a humongous thermal blanket, the great oceans moderate the temperature of Earth. On the other hand, places where very little surface or atmospheric moisture exists usually show extreme fluctuations in temperature. Some deserts fry during the day and freeze at night. Our own moon, which lacks an atmosphere and liquid water, is 261° F (127° C) in the sun and –279° F (-137° C) in the shade,⁴ a temperature swing of over 500° F (260° C)! Whoa!

As water cools and changes into *ice*, it becomes *less dense*. This is why ice cubes and icebergs float. The survival of many aquatic creatures is dependent on this property. Ice on the surface of a lake in winter acts as an insulator, trapping heat in the water below. For this very reason, most ice-covered lakes and ponds do not freeze solid in winter. If the Lord had given ice greater density than water, it would form first on the bottom and then grow until the lake or pond froze solid, killing almost everything in its path.

Approximately 97 percent of all Earth's water is found in the Ocean—about two percent in

Location of Water on Earth

97%	ocean
2%	Arctic/Antarctic ice
<1%	in the ground
<1%	lakes, ponds, rivers, streams
<1%	atmosphere

Arctic and Antarctic ice and icebergs, a little less than one percent underground, and only a fraction of a percent in lakes, ponds, rivers, and streams. Some water resides in the atmosphere as invisible *humidity*, or as rain and snow on its way from the ocean to other locations on Earth.

In His sovereignty, the Son of God has chosen to bless the earth with different amounts of precipitation. The Atacama (at - ah - KAH - mah) Desert in Chile, for instance, gets rain only *once every several years* and is thought to be the driest place on earth. Rainforests, however, receive large amounts of moisture. Each year Mount Waialeale (why - al - a - AL - a), on the island of Kauai, Hawaii, is deluged with an average of 472 inches (12 meters) of rain.⁵ That's 14 times the amount Seattle gets in a year! The Lord Jesus Christ also created a great variety of organisms that can thrive in these extremes of environment. Thus, this tremendous range in rainfall, from one spot on Earth to another, proclaims Jesus as the Master Architect of life.

God also uses water to give us a tiny peek into His awesome power. The substance of thunderstorms and hurricanes is moisture, and the force behind them can dramatically effect Earth. The amount of energy released in an average thunderstorm is greater than a *120-kiloton thermonuclear bomb*.⁶ And a hurricane can pack the punch of *thousands of atomic explosions*!⁷

Our Heavenly Father has placed water in a very prominent position in nature—it's



everywhere! God even compares Himself to water (John 7:37–39) and, in this way, illustrates His omnipresence. Water is vital to life, and it physically shapes the world around us. It reflects the Lord's life-giving Spirit and His awesome power. Our utter dependence on water should be a frequent reminder of our sweet dependence on the Lord Jesus Christ, its Creator!



Notes

- 1 Leonard Engel, *The Sea* (New York: Time Incorporated, 1963), 11.
- 2 Chemists have coined water the “universal solvent.”
- 3 Engel, *The Sea*, 11.
- 4 Theodore P. Snow, *The Dynamic Universe* (St. Paul: West Publishing Co., 1988), 173.
- 5 S. Dillon Ripley, *The Land and Wildlife of Tropical Asia* (New York: Time-Life Books, 1964), 32.
- 6 Luna B. Leopold & Kenneth S. Davis, *Water* (New York: Time-Life Books, 1970), 47.
- 7 David C. Holmes, *Weather Made Clear* (New York: Sterling Publishing CO., Inc., 1966), 63.

OUR HOME IN WATER

When God created life through His Son, He might have used any material He wanted. He could have formed us out of peanut butter and jelly, or even chocolate syrup! Instead, He chose **water** as the framework of His marvelous living creations. The Lord Jesus Christ’s ability to bring the complexity of life out of something so simple and formless as water reveals how awesome He is. To be sure, God created many other molecules vital to the existence of organisms, but the water molecule is His most versatile and abundant building block.

Our bodies are composed mostly of water. A medium-sized man is saturated with over 12 gallons (45 liters) of water! Most living things contain between 50 and 99 percent water. This liquid makes up three-quarters of an average chicken. A frog is 80 percent water. And a watermelon is aptly named because it is 97 percent water! Life is integrally connected with

Water Content of Living Things

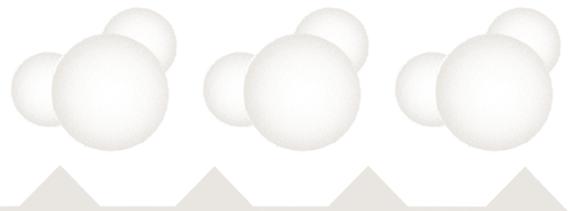
watermelon	97% water
jellyfish	95% water
tomato	94% water
our brain	85% water
earthworm	80% water
chicken	74% water
insects	50% water
bread	35% water
our bones	20% water*
sunflower seed	5% water

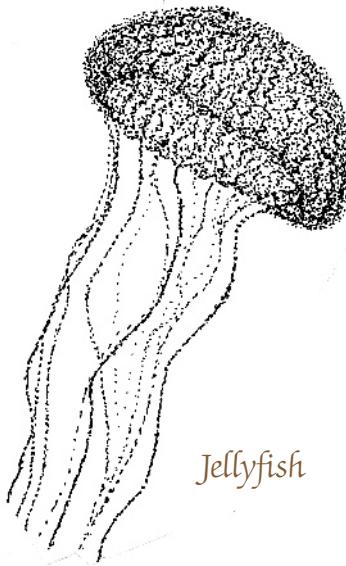
* Thus, the sayings, “dry as a bone” & “bone dry”

water—in a sense, water is “home” for all organisms, even those that live on land.

Our bodies need a continuous supply of fresh water to keep us healthy. Without it we would not be able to digest our food, obtain oxygen, eliminate waste, lubricate our joints, or stay warm in winter and cool in summer. We would not be able to think either, because our brain is composed mostly of water. Water allows each living creation of God to communicate with itself via nerves, hormones, or other chemicals, and with other creatures through sight, sounds, hearing, and touch—all impossible without water. Water is essential for the structure and operation of proteins and enzymes, which are the organizers and catalysts of life.

The manner in which each organism uses water, both internally and externally, is unique and reflects the resourcefulness of our Creator. Jellyfish and kelp (a seaweed), for instance, are both totally dependent on water for physical support. The buoyancy of the sea gives these organisms their shape. Out of water, jellyfish are helpless blobs. In the ocean, however, nothing is more graceful and beautiful!





Many aquatic creatures, like fish, get oxygen directly from their watery world. Others breathe air as we do. The Lord Jesus Christ blessed fish, tadpoles, and the larvae of certain insects (such as the dragonfly) with *gills* to extract oxygen from water. Water contains less than one percent oxygen, much less than air,¹ yet these remarkable creatures can live and thrive in it. What an amazing Creator we have!

Some marine animals have lungs and breathe air, yet depend on the ocean for food. The Lord gave a few of them the ability to stay submerged for long periods of time. Two of the most notable are the *sperm whale* and the *sea turtle*. The sperm whale can hold its breath for an hour and a half and dive two miles (3.2 kilometers) below the ocean's surface before coming back up for air. Sea turtles have been known to spend six hours or more underwater without breathing!

God equipped a handful of aquatic creatures with the capacity to withstand the tremendous pressures of the deep sea. When the sperm whale swims down two miles, it must endure a pressure of nearly 5,000 pounds per square inch (333 atmospheres). Normal atmospheric pressure is less than 15 pounds per square inch (one atmosphere or atm.).

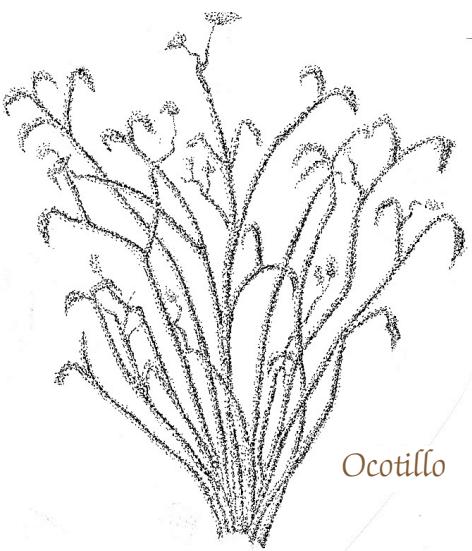
And there's more! The tripod fish can live at an incredible depth of five miles under the sea, with a crushing force of almost *six tons* per square inch (800 atmospheres) squeezing in around it.²

Creatures that live outside the water face severe obstacles too, but their problems are of a different kind. The major concern for terrestrial organisms is finding enough water to stay alive. Humans and animals were created by Christ with bodies that have very narrow limits of water tolerance. While a loss of as little as one or two percent total body water causes people to become thirsty,³ a loss of ten percent can cause death. Most people and land animals cannot go long without drinking water.

Although all land organisms were created to search out and preserve water, the genius of God's living design is especially apparent with desert life. Contrary to popular belief, the camel *cannot* store water in its hump, but it does use water very efficiently. The desert tortoise, however, actually can store up to a pint of fluid in a special sac located just under its shell.⁴ During the wet season, a large saguaro (sah - WAR - oh) cactus of Arizona can accumulate *six tons* of water in its trunk and then survive two years without further rain.⁵

The mesquite tree of the American Southwest has no special capacity to hoard water, but it's an expert water finder. The mesquite solves the problem of scant desert rain by sending roots deep into the ground. It survives by locating groundwater as many as 100 feet (30 meters) beneath the surface.

God gave the hairnet plant of Death Valley, California, a way to gather water that is quite ingenious. It is one of those rare plants that can survive on moisture absorbed straight from the air.⁶ The Lord Jesus Christ planted the hairnet *upside-down* with its roots reaching toward the sky. This plant's name comes from the fact that its aerial roots remind people of a hairnet. This special vegetation takes moisture directly from the air when occasional clouds pass overhead.



Ocotillo

Other desert organisms disappear or become inactive during times of little or no rain. The ocotillo (oh - kah - TEE - yo) drops its leaves during drought to prevent excessive water loss. This plant simply grows new leaves when rain returns.⁷ The spadefoot toad sleeps underground during dry spells. When desert rains come in sufficient quantities, the toad emerges from its underground hole to reproduce and feed. The spadefoot spends up to ten months each year napping in the ground.⁸

Unlike deserts, rainforests have an abundance of moisture. Yet the number of jungle organisms is so great, that even here competition for water exists. Smaller plants and animals often live high in the canopy trees, giving them access to rain water before it hits the ground. Such is the case for orchids and bromeliads (bro - ME - lee - ads). Instead of growing in soil, these flowers live on the branches of other plants, absorbing some of the rain as it passes through the trees. Likewise, several kinds of tropical frogs spend their entire lives in pools of water formed by leaves high in the treetops.⁹

Christ's infinitely intelligent design of life, combined with His love for creation, is obvious in nature. He has given all His living creations unique

and marvelous homes of water. Through a knowledge of these, we can more fully appreciate the fragility of life, as well as the genius of God's wonderful creativity. □

Notes

1 Air contains 21 percent oxygen.

2 See *CREATOR* March/April 1995, pg 5.

3 Luna B. Leopold & Kenneth S. Davis, *Water* (New York: Time-Life Books, 1970), 107.

4 *Ibid.*, 108.

5 Uwe George, *In the Deserts of This Earth* (New York: Harcourt Brace Jovanovich, 1977), 123.

6 *Ibid.*, 128.

7 Leopold, *Water*, 108–109. The ocotillo is found in the Desert Southwest of the U.S., and in Mexico.

8 This is known as *estivation*.

9 Arthur Dorros, *Rain Forest Secrets* (New York: Scholastic Inc., 1990), 15.

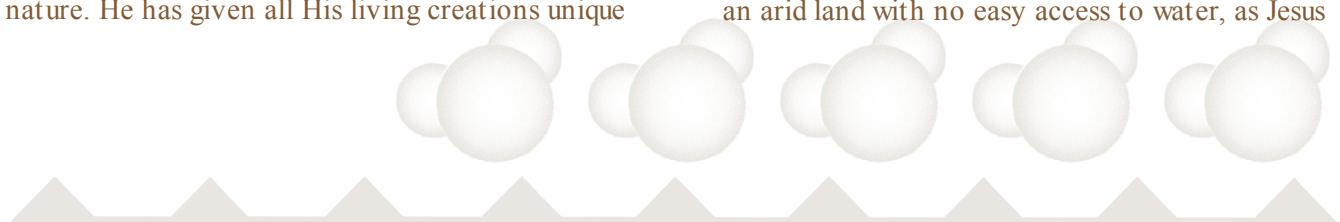


Spadefoot toad

LIVING WATER

Who can doubt the importance of water? It is found everywhere on earth. Our very being is composed largely of this liquid—65 to 75 percent of our body is made of water. Animals, plants, and humans go to great lengths to obtain and store it. There are some people in the world, such as the Bushmen of the Kalahari Desert in Africa, who work very hard to find even small amounts of water to stay alive.

In some ways, the plentiful supply of water in our modern society is unfortunate. If we lived in an arid land with no easy access to water, as Jesus



did, we might better understand why He compared Himself to *Streams of Living Water*. And we might more fully comprehend how utterly dependent we are on Him.

The Bible says that the Spirit of Christ holds together the universe and all that's in it (Colossians 1:17), much like water is the glue of all living things. I firmly believe that if the Holy Spirit left the earth—if indeed this were possible—all life as we know it would literally cease to exist. Fortunately, our God is a *loving Creator*, and He provides for the physical needs of all creatures, even those people who don't believe in Him (Matthew 5:45).

The young mesquite tree stays alive by sending roots deep into the ground in search of water. When we believe in Jesus Christ, He gives us “roots” to soak in His life, His Living Water (see Psalm 1:3, Colossians 2:6-7). It is through Christ's Spirit that we are made eternally alive.

Jesus said, "I tell you the truth, no one can enter the kingdom of God unless he is born of water and the Spirit. Flesh gives birth to flesh, but the Spirit gives birth to spirit." (John 3:5-6) We are all born of water—water makes up most of our body's framework from the moment of conception. The only people who are born of the Spirit, however, are those who believe that Jesus Christ is the Son of God, that He died on the cross for their sins, and that He rose from death to give them eternal life—*His life*. These Believers are born of the Spirit of God and have Living Water flowing within them. Jesus summarized it this way: "I tell you the truth, no one can see the kingdom of God unless he is born again." (John 3:3) We are born once of flesh, made of water (John 3:6), but we must believe in God's Son to be born a second time and receive eternal life.

If you have never entered into a personal relationship with Jesus Christ and believed in Him as your Creator, Savior, and Lord, please consider surrendering yourself to Him now and receiving His Living Water. First, recognize that you are a sinner and have offended a Holy God by your sins. Next, repent of your sins in prayer before God.

Believe with your heart that Jesus died on a cross for your sins and rose from death to give you eternal life:

“Dear Father in Heaven, I recognize that I have lived my life independently of You and this is sin. Please forgive me through Your Son, Jesus Christ—through His death on the cross. Jesus, please come into my heart right now. I embrace You as my God and my Savior and my Life. Show me how to live the way You want me to live. In the name of the Lord Jesus Christ, I pray. Amen.”

When can I go and meet with God?
Psalm 42:6



Thank You !

HIS CREATION wants to thank the Lord Jesus for allowing us to continue this ministry all these years. Without Him, nothing we are doing would be possible. We would also like to thank Him for all of you who have contributed in one way or another to our work—it has made a BIG difference. Thank you for your time, talent, resources, prayers, encouragement, and love! HIS CREATION is a nonprofit effort and is *dependent* upon your continued support.



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