

October 2013

Volume 24:10

# Discovery

*Scripture & Science for Kids*





# PLANTS Were MADE For PEOPLE

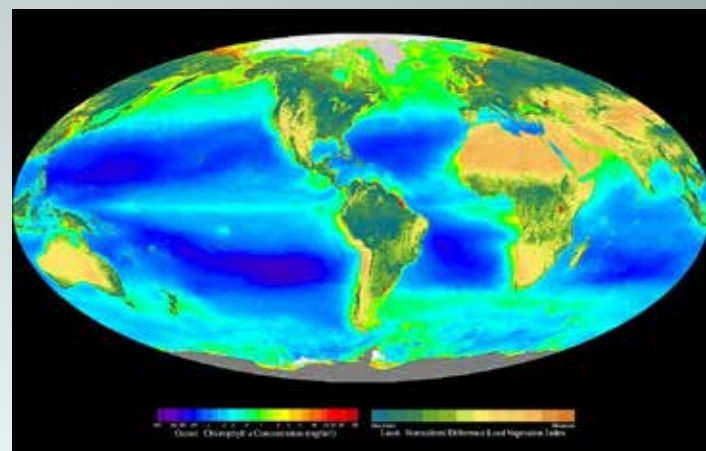
DAVE MILLER

## GOD CREATED PLANTS

FOR AT LEAST TWO VERY IMPORTANT PURPOSES. FIRST, PLANTS WERE INTENDED

by God to serve as food for people and for animals. Genesis 1:29-31 says: "And God said, 'See, I have given you every herb that yields seed which is on the face of all the earth, and every tree whose fruit yields seed; **to you it shall be for food.** Also, to every beast of the earth, to every bird of the air, and to everything that creeps on the earth, in which there is life, I have given every green herb for food.'" By providing us with food from crops and fruit trees, God shows His magnificent love for us. As Paul told the people of Lystra: "Nevertheless He did not leave Himself without witness, in that He did good, gave us rain from heaven and fruitful seasons, filling our hearts with food and gladness" (Acts 14:17).

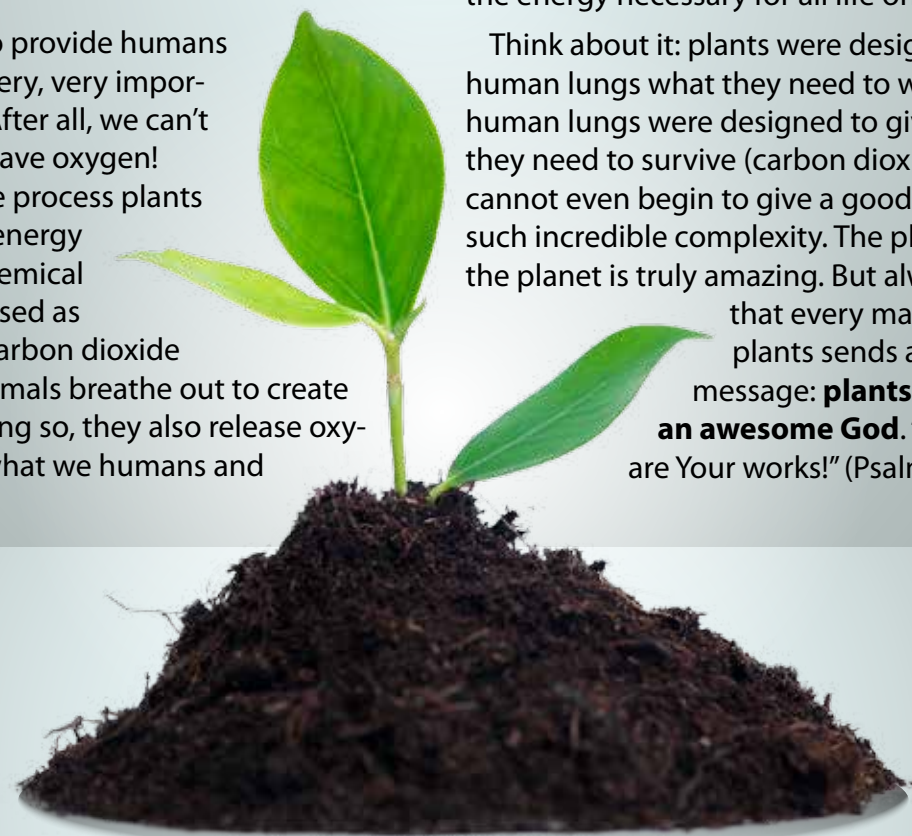
Second, plants also provide humans and animals with a very, very important thing: oxygen. After all, we can't breathe if we don't have oxygen! Photosynthesis is the process plants use to convert light energy from the Sun into chemical energy that can be used as fuel. Plants use the carbon dioxide that humans and animals breathe out to create their food. But in doing so, they also release oxygen—which is just what we humans and



Photosynthesis takes place all over the world, even in the ocean with phytoplankton. The dark red, green, and yellow colors on this image of Earth show the places in the ocean and on the land where lots of photosynthesis happens.

the animals need to breathe! And what's more, plant photosynthesis supplies the chemicals and most of the energy necessary for all life on Earth!

Think about it: plants were designed to give human lungs what they need to work (oxygen), and human lungs were designed to give plants what they need to survive (carbon dioxide). Evolutionists cannot even begin to give a good explanation for such incredible complexity. The plant kingdom of the planet is truly amazing. But always understand that every marvelous aspect of plants sends a single, powerful message: **plants were created by an awesome God.** "How awesome are Your works!" (Psalm 66:3).



# HELLO ALOE!

ERIC LYONS

## ON DAY THREE OF THE CREATION WEEK, GOD CAUSED THE DRY LAND TO APPEAR OUT OF THE WATER-

covered Earth. The Creator of the Universe then richly blessed mankind with many different kinds of vegetation—from grape vines to rosebushes and from banana trees to okra plants.

One remarkable group of plants that God created is known as aloe. There are hundreds of species of aloe plants that grow naturally in warmer countries such as South Africa and Madagascar. Most aloe plants grow without a stem, and their leaves grow directly out of the ground. Some reach only a few inches tall, while others can grow to heights of over 25 feet. They are known as succulents because they store water in their broad, pointed, spiny leaves.

Man has discovered that God's aloe plants serve a variety of purposes. For example, the fibers in the leaves of certain species of African aloe have been used for making everything from lace to rope to fishing nets. Most people, however, are probably more familiar with the species of aloe known as *aloe vera*, and its many helpful uses.

Though as of yet we do not know for certain all of the ways that *aloe vera* may be helpful to mankind, for thousands of years people have used it for various skin problems. An ancient Egyptian document (known as the *Ebers Papyrus*) mentioned *aloe vera* being used for burns as well as for ulcers and skin disease. Many people today use the amazing gel (harvested from the inside of the thick *aloe vera* leaves) in their lotions to soothe and moisturize their skin and treat sunburn.

Mike Adams, editor of NaturalNews.com, insists that "*aloe vera* is the most impressive herb of them all," just ahead of garlic. In addition to hydrating and nourishing skin, and accelerating the growth of new skin tissue, Adams is convinced that *aloe vera* should be used for joint and muscle pain, for boosting immune systems, as well as for many other things.

Likely, we will never know in this life all of the ways that plants such as *aloe vera* can help us. What we can know is that the God Who created aloe and every other kind of vegetation is worthy of our praise and thanksgiving.





# PLANTS THAT CAN DO WHAT?

JEFF MILLER

## YOU HAVE PROBABLY SEEN

MANY PLANTS AROUND YOUR YARD—TREES, BUSHES, FLOWERS, AND MAYBE EVEN SOME vegetable plants. But some of the most amazing plants that God created are not found outside most people's bedroom windows.

### PLANTS THAT CAN...INHALE BUGS?

**Yellow bladderworts:** They float in water, which does not provide enough nutrients for them to live. So they eat water fleas. They are the fastest insect-eating plant in the world, since their traps can open and close within 15/1000's of a second.

When it is open, it sucks in its prey like a vacuum!



www.wikipedia.org (Rkitko) 2013 cc-by-sa-3.0

### PLANTS THAT CAN...FEEL?

**Sensitive mimosa:** The slightest touch will make its leaves spring shut. This is used as a defense against insects.



### PLANTS THAT CAN...DIGEST?

**White collared pitcher plants:** These plants drip nectar. When termites climb on them, the insects slip and fall into a pool of digestive acid and rain water inside the plant, which slowly digests them.



www.wikipedia.org (JeremiahsCPs) 2013 cc-by-sa-3.0

www.wikipedia.org (Mgiganteus) 2013 cc-by-sa-3.0

### PLANTS THAT CAN...SMELL?

**Cuscuta (strangleweeds):** Scientists have discovered that they can smell nearby plants. They grow towards and wrap themselves around their neighbors, strangling them and sucking out their nutrients.

**Lima beans:** As bugs start eating the lima bean plant, it releases nectar. Scientists have discovered that other nearby lima bean plants can smell the nectar, and even though they have not been chewed on, they release their own nectar. When ants smell the nectar, they scurry to the rescue, running off the bugs that are eating the lima bean plant, and getting some tasty nectar in return.



www.wikipedia.org (Mbc) 2013 cc-by-sa-3.0

### PLANTS THAT CAN...CALL FOR HELP?

**Wild tobacco plants:** Found in the desert, this plant makes a poison that is pumped into bugs that try to eat it—nicotine (NICK-oh-teen). Tobacco hawkmoths lay eggs on the plant, and their children chew the tobacco, not being affected by the poisonous nicotine. So, like the lima bean plant, the tobacco plant calls for help. It releases a smell that attracts an insect known as the "big-eyed bug," which likes to eat hawkmoth caterpillars.



### PLANTS THAT CAN...DISGUISE THEMSELVES?

**Bee orchids:** These flowers were designed to look like a female wasp, including having hairs that feel like female wasp hairs and even releasing smells that female wasps give off. This attracts male wasps, which try to mate with the plant. When a male wasp climbs on the orchid, pollen sticks to the wasp. The wasp then moves to the next orchid to try to mate with it, leaving some of the pollen, which allows the orchid to bloom.



### PLANTS THAT CAN...EAT RODENTS?

**Rat-eating pitcher plant:** This plant can do what its name says. It is the largest meat-eating plant in the world and is found in the Philippines.



www.wikipedia.org (Attenboroughii) 2013 cc-by-sa-3.0

CONTINUED





www.wikipedia.org (Prasanth) 2013 cc-by-sa-3.0

## PLANTS THAT CAN...HEAR?

**Dancing plant:** This plant moves its leaves when they are exposed to sunlight, warmth, or vibrations—including music. So basically, it can dance!



## PLANTS THAT CAN...DRILL HOLES?

**Erodium seeds:** The erodium flower plant "has babies" by launching its seeds, which have parachutes attached to them, into the air using a spring-like motion. The seeds sit at the end of a stalk that is in the shape of a screw. The seeds float through the air to other nearby areas. When they hit the ground, they start to soak up water. As the seed fills up with water, it causes the "screw" to unwind, drilling the seed into the ground.



www.wikipedia.org (Didier Descouens) 2013 cc-by-sa-3.0

www.wikipedia.org (Aiwok) 2013 cc-by-sa-3.0

Some people believe that these amazing abilities in the plant kingdom came from evolution—that plants gradually **made themselves** the way they are. But that makes no sense. Each one of these amazing features has specific purposes or reasons for their existence, and purposes only come as the result of an intelligent mind making them. Evolution does not have a mind behind it. But

Creation does. In Genesis 1:11-13, the Bible tells us that God created all plants, and Genesis 2:15 tells us that God wanted Adam to take care of the plants of the Garden of Eden. But always remember that, even though everything God created was good and important for humans (Genesis 1:29,31), God made humans special. Humans are of "more value" than other living things, including the beautiful flowers of the field (Matthew 6:26-30). Unlike plants, humans were created "in the image of God" (Genesis 1:27). That means that even though plants can be pretty amazing, they come nowhere near to being as amazing as you are!

## ACTIVITY PAGES

- A. Sensitive mimosa
- B. Bee orchids
- C. Rat-eating pitcher plant
- D. *Cuscuta*
- E. Yellow bladderworts
- F. White collared pitcher plants
- G. *Aloe vera*
- H. Dancing plant

## MATCH THE PLANTS

1. \_\_\_ The fastest insect-eating plant in the world
2. \_\_\_ Smell and grow towards nearby plants, strangling them and sucking out their nutrients
3. \_\_\_ Designed to look like female wasps
4. \_\_\_ Use digestive acid and rain water to slowly digest insects such as termites
5. \_\_\_ Leaves spring shut with the slightest of touch
6. \_\_\_ The largest meat-eating plant in the world
7. \_\_\_ Moves its leaves when exposed to sunlight, warmth, or vibrations—including music
8. \_\_\_ Contains amazing gel inside its leaves that helps sooth and moisturize one's skin

## TRUE OR FALSE

1. \_\_\_ In Genesis 1:11-13, the Bible tells us that God caused plants to evolve over many millions of years.
2. \_\_\_ Humans and plants were created "in the image of God."
3. \_\_\_ A new study shows that plants seem to perform math calculations in order to preserve the correct amount of food during the night.
4. \_\_\_ On day three of the creation week, God caused the dry land to appear out of the water-covered Earth.
5. \_\_\_ Plants were never intended by God to serve as food for people.
6. \_\_\_ Most aloe plants grow without a stem, and their leaves grow directly out of the ground.
7. \_\_\_ Plants provide humans and animals with oxygen.
8. \_\_\_ Plants use the carbon dioxide that humans and animals breathe out to create their food.



## FILL IN THE BIBLE VERSES (NKJV)

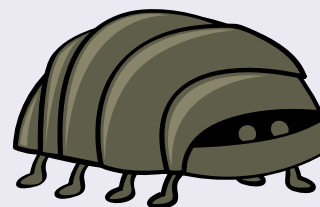
1. "And the earth brought forth grass, the herb that yields seed according to its kind, and the tree that yields fruit, whose \_\_\_\_\_ is in itself according to its \_\_\_\_\_. And God saw that it was \_\_\_\_\_" (Genesis 1:12).
2. "And God said, 'See, I have given you every herb that yields seed which is on the face of all the earth, and every tree whose fruit yields seed; to \_\_\_\_\_ it shall be for \_\_\_\_\_. Also, to every beast of the earth, to every bird of the air, and to every-thing that creeps on the earth, in which there is life, I have given \_\_\_\_\_ green herb for food'" (Genesis 1:29-30).



Dear Digger Doug,  
How do pill-bugs roll up in a ball?  
—Andrew Smith, Auburn, AL

Dear Andrew,

God has created a lot of interesting creatures for us to study. One of those is the pill bug. Some people call it the "roly poly." Did you know, however, that the pill bug is not a bug at all? It is actually a crustacean like a crab or a shrimp. It has a hard outer shell and special stomach muscles underneath the shell. When it is threatened, it contracts those muscles and rolls itself into a small ball. This process is called conglobation [kon-glow-BAY-shun]. The tiny balled-up "bug" looks like a little pill. That is why it is called a pill bug. Mother pill bugs have a pouch like a marsupial that can carry over 100 babies at one time. The next time you see this little crustacean, it can remind you that our awesome God has made small things for us to study and enjoy. Thanks, Andrew, for your question!







APOLOGETICS PRESS, INC.  
 230 Landmark Drive  
 Montgomery, AL 36117  
 (800) 234-8558 (Orders)  
 (334) 272-8558  
 www.DiscoveryMagazine.com  
 © 2013 Apologetics Press, Inc.  
 All Rights Reserved

Nonprofit Organization  
 U.S. Postage  
**PAID**  
 Montgomery, AL  
 Permit No. 513

Editor: Kyle Butt, M.A.  
 Associate Editor: Eric Lyons, M.Min.  
 Layout and Design: Rob Baker, M.Ed.

ADDRESS SERVICE REQUESTED

# PLANTS that do Math

KYLE BUTT

This is the first study to suggest that plants do math. But researchers think that this process could explain other biological systems such as animal hibernation and long migrations in which food supplies need to be regulated to ensure survival. More research will be needed to verify Smith and

Howard's conclusions, but Howard says that plants are doing "sophisticated arithmetic calculations."

If plants really are doing math, that means they have been programmed by some type of intelligence. This intelligence must understand arithmetic, and be able to write into plants a code that the plants can use to properly do arithmetic. Atheism (the idea that there is no God) cannot explain how plants can use complicated mathematical calculations to survive. When the Creator designed plants, He saw that they were very good (Genesis 1:12). The concept of an intelligent Designer is the only one that adds up.



## ONE OF THE FIRST STEPS

**TO BECOMING A GOOD STUDENT IN SCHOOL IS TO LEARN THE BASICS: READING, writing, and arithmetic.** Students spend hours trying to master the basics of math. But it seems that students in grade school are not the only math masters. A new study shows that plants may be great at math as well. Scientists Allison Smith and Martin Howard say that plants seem to perform math calculations in order to preserve the correct amount of food during the night.

One science writer named Heidi Ledford explained that scientists once thought plants broke down starch at night at a constant rate. Experiments have shown, however, that plants can change how fast they consume food based on the number of hours of darkness they experience. Regardless of how many hours plants sit in darkness, they can regulate how quickly they use food so that virtually no food is left when the light returns.<sup>1</sup>

### REFERENCE

1. Ledford, Heidi (2013), "Plants Perform Molecular Maths," *Nature*, <http://www.nature.com/news/plants-perform-molecular-maths-1.13251>.

## ANSWERS

**FILL IN THE BIBLE VERSES:** 1. seed, kind, good; 2. you, food, every.  
**MATCHING THE PLANTS:** 1. E (Yellow bladderwort); 2. D (*Cuscuta*); 3. B (Bee orchids); 4. F (White collared pitcher plants); 5. A (Sensitive mimosa); 6. C (Rat-eating pitcher plant); 7. H (Dancing plant); 8. G (*Aloe vera*).  
**TRUE OR FALSE:** 1-F; 2-F; 3-T; 4-T; 5-F; 6-T; 7-T; 8-T.  
 Yearly Subscription Fees in U.S. Funds Only • United States of America: Individual rate: \$14 each • Bulk rate (at least 5 to same address): \$10.50 each.  
 Club rate (at least 10 to different address paid together): \$12 • Homeschool discount 10% off above rates

