

# WEIRD AND WONDERFUL

## The Skunk Cabbage

**M**ANY plants die during the winter in cold countries, and others only begin to grow when the earth warms up in spring. But have you heard about Skunk Cabbages — plants which have their own “central heating” that allows them to stay alive during the winter, and begin to grow when the ground is frozen and snow is lying around?

There are two kinds of this plant, the Eastern and Western skunk cabbage. They grow in North America, and parts of northern Asia. Although they look a little different, both have the wonderful ability to produce heat. They melt the ice and snow, as their flowers push



Eastern Skunk Cabbage



Western Skunk Cabbage

up from the soil. The heat produced can be 15-30 deg C. higher than the air temperature! They are called skunk cabbages because of their horrible smell, which is like rotting meat! This attracts flies and other insects, which pollinate the plant. By pushing through the ground before the weather warms up, skunk cabbages attract the insects which come out in early spring.

How do these plants make heat? During the summer they capture energy from the sun, which is turned into glucose. This is stored in their roots during the winter as starch. When the flowers start to push through the soil, the starch becomes sugar, and is burned to make heat. This is a very complicated process, and scientists have done lots of studies on it.

**It seems impossible to believe that skunk cabbages could have gradually evolved the amazing and complicated way they produce heat. We believe they were designed by God, the Creator.**

## GOD WAS PLEASED!

Do you like painting or craft-work? When you finish painting a picture or making a model, you usually feel pleased with it. You may even enter it in a competition, and hope for a prize. We are creative because God is a Creator, and He made us in His image.



The Bible tells us that when He finished creating the world and everything in it, “God looked at everything he had made, and it was very good.” (Genesis 1: 31). Surely God must have really enjoyed creating everything, especially things like flowers and butterflies! And He also showed how much He cares for His creatures by giving some of them their amazing camouflage.



Sadly, God’s world has been spoilt by people’s sin, but He still loves us, and sent His Son, Jesus, to prove this. Jesus died and rose again so that our sins can be forgiven, and we can live with Him for ever. Although God cares for all His creation, He loves us best of all. Jesus said, “Not a single sparrow can fall to the ground without your Father knowing it. And the very hairs on your head are all numbered. So don’t be afraid; you are more valuable to God than a whole flock of sparrows.” (Matthew 10: 29-31, New Living Translation).

### PUZZLE ANSWERS

1. Spider (not an insect). 2. Dolphin (not a fish). 3. Frog (not a mammal). 4. Bat (not a mammal). 5. Toad (not a reptile). 6. Hedgehog (the others don't fly). 7. Swan (the others don't fly).  
**ODD ONE OUT:**  
 “He made heaven and earth, the sea and everything in it.” (Psalm 146: 6).  
**Bible verse:**

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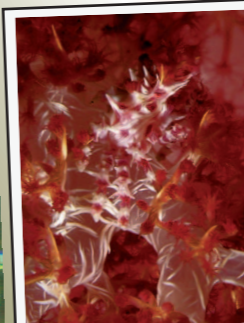
## HIDING — IN A DESERT!



You might think it would be almost impossible to hide in a desert, but the ibexes (a kind of deer) in the picture above match their surroundings so well that they are almost invisible. Can you spot them? There are at least three.

## FIND ME IF YOU CAN!

Lots of animals have clever ways of hiding themselves. The flounder on the right changes colour to match the sand on the seabed. The leafy sea-dragon (a kind of seahorse) in the photo below looks like a pile of seaweed! God has enabled many of His creatures to protect themselves by giving them this kind of camouflage. This shows us that God cares for His creatures. He cares for us even more!



Can you see the crab hiding in coral (above, left)? The bittern on the right is quite well hidden, too.



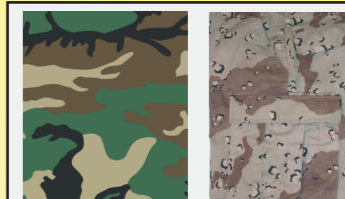
The Goldenrod Crab Spider can change colour to match a flower. Can you spot it in the picture above, near the hover-fly?

# Masters of DISGUISE!

People have been using disguise and camouflage for centuries. Many creatures also have clever ways of disguising or hiding themselves. Could this have happened by accident?

## How to hide

People design special clothing for soldiers, and patterns for military vehicles like planes and tanks, so that they can't be seen easily. This is done by using colours and patterns that blend in with the background. In fields and forests, green and brown patterns are used, while in deserts brown, sandy colours are chosen. This makes both people and vehicles difficult to spot.



Soldiers wear camouflaged clothing to prevent enemies seeing them. On the left (above) is the pattern worn in woods and fields, and on the right the style used in deserts.



The plane on the left has been specially painted to make it almost invisible when it flies, whether seen from above or below. The top is painted to match the ground below, and the bottom to match the sky. This camouflage was designed — it didn't happen by chance!

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 God was pleased!

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## CHAMELEONS' FAST COLOUR CHANGE

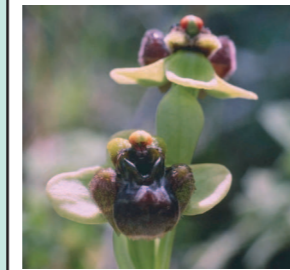


Chameleons (above) are masters of disguise. These amazing lizards can change colour very quickly to match their surroundings. On a tree-trunk or rock they can become brown, and among leaves turn green. Under their see-through skin there are layers of cells with yellow, blue, red and white colouring. These are mixed together to make different shades, much like the way an artist mixes paints on a palette. Underneath these layers is a brown layer, which is used to make the colours darker.

Chameleons can change from being green to dark brown – and all the colours in between. Scientists still don't really understand how chameleons do it. They certainly don't change colour by *thinking* about it. It seems that this ability to change colour so quickly is part of God's design.

## Flowers that fool insects

Many flowers depend on insects to pollinate them. Some orchids look and even smell like insects to attract pollinators. One of them is the Bumble-bee Orchid (left). This looks and smells so much like a female bumble-bee that male bumble-bees go to it, where they get dusted with pollen, which they then take to another flower. The Hammer Orchid (below) depends on just one kind of wasp to pollinate it, and the flowers look and smell like a female. They also have a special hinge. When a male wasp, looking for a mate, lands on the flower, the hinge (arrowed) tips the wasp forward, and dusts it with pollen, which is then taken to another orchid.



Evolutionists tell us that the orchids gradually evolved to look and smell like insects. This seems impossible. It makes more sense to believe that God created their amazing design.

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## PLEASE LEAVE US ALONE!

**S**OME insects have amazing disguises (known as mimicry), which help them avoid being eaten by birds. On the right (top to bottom) you see an insect that looks like a living leaf, one that is like a leaf with dead bits on it, another that is like a dead leaf, and one with false eyes, which would frighten birds away, since it would remind them of their own enemies — owls.

The caterpillar (below left) is also well disguised as a green stalk, and the stick insect (centre) looks just like a twig. Other insects, although they are harmless, look like stinging insects. Hover-flies are useful insects which eat pests called aphids, and many of them, like the one in the picture below (third right), look like wasps or hornets. This fools birds into thinking they will get stung if they eat them, so they leave them well alone.

The evolution theory says that these insects must have evolved to be the way they are over thousands of years. So leaf mimics gradually looked a little bit more like a leaf, until eventually their disguise was perfect. Can you really believe that these amazing imitations happened like that?



Photos from Wikipedia

## NATURE NOTES by the editor



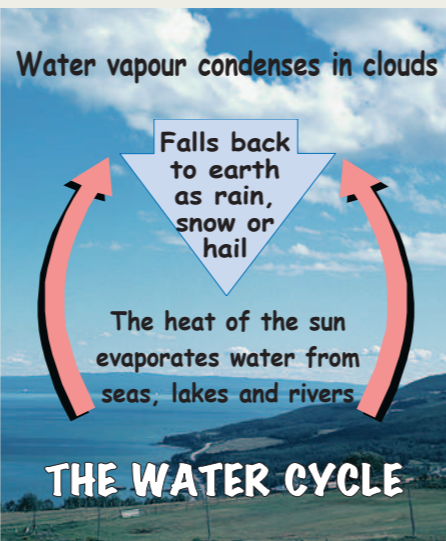
Do you ever complain about rain? We often think we get too much, although people in many parts of the world would like a lot more. Without rain, plants wouldn't grow, and we wouldn't have any food. Our world has a wonderful system called 'The water cycle.' The power of the sun turns water from seas, lakes and rivers into invisible water vapour or steam — this is called evaporation. The vapour rises into the air, where it forms clouds. When the clouds cool, the vapour condenses into raindrops, which fall back to earth as rain. If it is very cold, the water vapour may freeze to make snow crystals, and raindrops sometimes freeze to become hail-stones. When the rain, snow or hail reach the earth, the whole cycle begins again.



Rain falling from clouds

The water cycle is all part of God's provision for His creation, and was mentioned in the Bible several thousand years ago — long before people understood it. "God takes the drops of water from the earth. And he turns them into drops of rain. Then the rain pours down from the clouds. And showers fall on people" (*Job 36: 27-28.*) Let's thank God for the rain!

—Geoff Chapman



## PUZZLE CORNER

Take the first letter of each object to spell a Bible verse about what God did



(Answers on the next page)

## FIND THE ODD ONE OUT

1. Moth, ant, spider, locust.
2. Shark, dolphin, tuna, cod.
3. Zebra, sheep, dog, frog.
4. Parrot, bat, crow, eagle.
5. Toad, crocodile, iguana, snake.
6. Kiwi, ostrich, swan, penguin.
7. Cow, pig, hedgehog, sheep.

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