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Discovery

Scripture & Science for Kids



SUPER MARSUPIALS

ERIC LYONS

Tasmanian devil



Before you were born, you most likely lived inside of your mother's womb for about 40 weeks. During that time you grew from being a one-celled human life form (called a zygote)

to a baby made up of billions of cells. In nine months, you grew arms, legs, eyes, ears, fingers, toes, lungs, and everything else that goes along with being a baby. This is the way God designed humans to begin their lives—inside of their mothers for about nine months of growth and development.

Many animals also spend several months developing inside of their mothers before birth. Buffalo, moose, cows, and otters all remain in their mothers about the same amount of time prior to delivery as humans do.

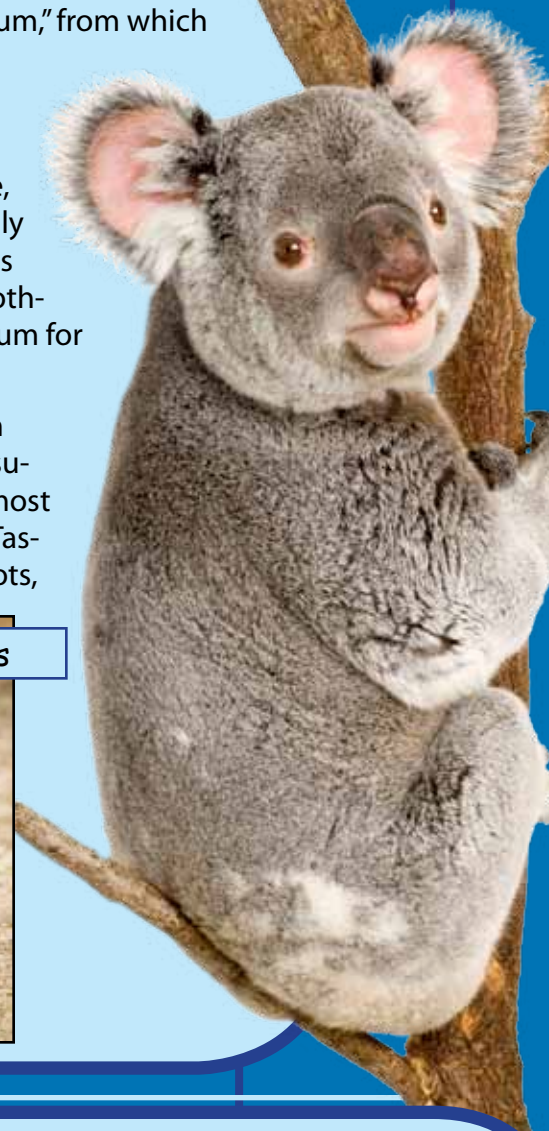
Some animals, known as marsupials (mar-SOO-pee-uhs), spend far less time inside of their mother's womb. Marsupials often are born after only a few days or weeks and may weigh less than one ounce at birth. Since marsupials are born so early, and are unable to cope very well outside of their mother's body, God designed mother marsupials with a special pouch (or a fold of skin) where baby

marsupials continue to grow. The mother's pouch is called a "marsupium," from which we get the name marsupial.

When a marsupial (such as a kangaroo) is born, it is born with the God-given instinct to wiggle across its mother's body until it finds her pouch. In the pouch, the baby marsupial is able to stay warm and safe, while suckling milk from its mother. Some mothers bear and nurse only one baby at a time. Others, like the opossum, can have up to 16 babies at a time. As baby marsupials grow, they will eventually leave their mother's pouch, but they may continue crawling in and out of the marsupium for more than a year.

God made marsupials in a variety of sizes. Some, like kangaroos, can grow to be nine feet long from head to tail, while others, such as marsupial mice, are only about five inches long. Kangaroos are among the most well-known marsupials, along with koalas, opossums, wombats, and Tasmanian devils. Some of the lesser known marsupials include bandicoots, marsupial moles, and marsupial mice.

Koala



Kangaroos



Opossum



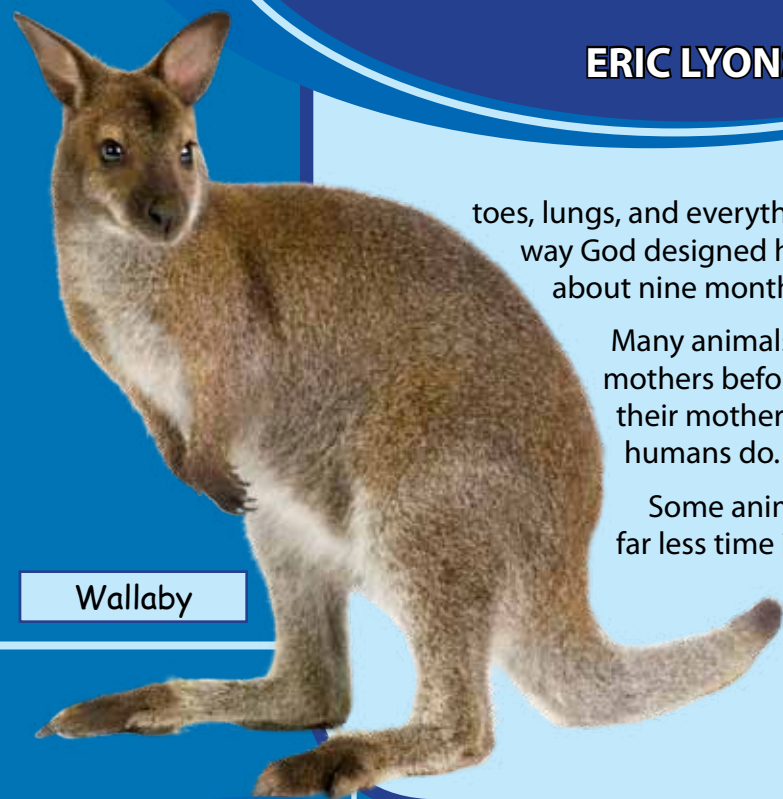
Quokka



Wombat



Wallaby



MARSUPIAL FACTS

- Most marsupials are found in Australia, New Zealand, Tasmania, and New Guinea. Some are found in South America. While scientists believe that marsupials once were fairly common in North America, today only one (the Virginia opossum) calls this continent home.
- Male marsupials have very little to do with raising their young, leaving this job entirely to the mothers.
- Most marsupials keep to themselves and are mainly **nocturnal** creatures (which means they are active mostly at night).
- Scientists have learned that the brains of marsupials are smaller on average than the brains of other mammals of comparable size.
- The diet of marsupials is varied. Some, like koalas, live entirely off of vegetation. We call these kinds of animals **herbivores**. Others, like bandicoots, are **omnivores**, which means they eat both plants and small animals. Tasmanian devils are the largest living meat-eating marsupial. Meat-eaters are called **carnivores**.
- One of the more fearsome-looking marsupials, the marsupial wolf, was last seen in the 1950s on the island of Tasmania. It is now believed to be extinct.

MARSUPIAL HIGHLIGHTS

- Wombats are some of the cutest marsupials on the planet. They live in Australia and Tasmania, but are fairly rare. At two-and-a-half to four feet long, wombats are the biggest burrowing mammals in the world. You may have seen a little mole tunneling in your yard. Can you imagine a four-foot-long animal burrowing tunnels in your backyard? That would be a sight.
- To keep dirt out of the wombat's pouch (and away from its babies) as it tunnels in the earth, God made the wombat's pouch to face backwards. God also gave the wombat short legs, large paws, and sharp claws, all of which make the wombat a better burrower.
- If you ever visit Australia and look for a wombat, it will not do much good to look for one in the daytime. Wombats only come out at night. Do you remember what we call these kinds of creatures?

HOP TO IT!



DAVE MILLER

We can't help but be awed and stand in wonder at the fascinating features of God's creatures! Take, for instance, the kangaroo (and the many smaller family species like the wallaby, tree-kangaroo, wallaroo, pademelon, and Quokka). Unique to Australia, kangaroos are the only large animals that move from one place to another by hopping. The Red Kangaroo typically hops at 13-16 mph, but can speed up to 44 mph over short distances, and even sustain a speed of 25 mph for over a mile. God specially designed the kangaroo's fast and energy-efficient method of travel. The kangaroo's ability to regularly cover large distances in search of food and water is crucial to survival.

God also designed the kangaroo's specialized teeth for grazing. Its incisors are able to crop grass close to the ground, while its molars chop and grind the grass. Since the two sides of the lower jaw are not joined together, the lower incisors are farther apart, giving the kangaroo a wider bite. The silica in grass is abrasive, so kangaroo molars move forward as they are ground down and eventually fall out, only to be replaced by new teeth that grow in the back.

The female kangaroo is especially known for her pocket pouch where her baby (known as a "joey") lives until ready to be on its own. In times of drought and poor food sources, God made it possible for a mother kangaroo to slow down or stop the development of a new baby until the previous joey is able to leave the pouch. This action is known as diapause. God even designed the mother so she can vary the makeup of her milk according to the needs of the joey. In fact, she can produce two different kinds of milk at the same time for



the newborn and the older joey still in the pouch. God is awesome!

But that's not all. The kangaroo's breathing is linked to its hopping action. As its feet leave the ground, air is expelled from the lungs. Bringing the feet forward for landing refills the lungs. Studies of kangaroos and wallabies show that, beyond the minimum energy needed to hop at all, their increased speed requires very little extra effort (much less than that of a horse, dog, or human). God made the kangaroo a model of energy efficiency. "Lift up your eyes on high, and see who has created these things" (Isaiah 40:26).



COME CLIMB WITH ME

CALEB COLLEY

You have heard people talk about "koala bears," but koalas actually are not bears. Like bears, koalas are mammals, but unlike bears, koalas are members of the group of pouched animals we call marsupials. The koala is Australia's most popular and most loved marsupial. God equipped koalas with strong, sharp

a drawstring-like muscle to close the pouch and secure her young. A female koala can have one baby koala each year for about 12 years. A baby koala is called a "joey" and at birth is hairless, blind, and earless. After seven months, the joey leaves its mother's pouch and clings to her back. A joey becomes independent after one year.

Koalas mainly eat eucalyptus leaves. This diet doesn't bore them, because there are more than 600 different kinds of eucalyptus trees. Zoologists know that a diet of these leaves would hurt or kill most animals, but God has given koalas the special ability to detoxify poison in their livers. Koalas also have a special fiber-digesting organ called a "caecum." Another benefit is the strong smell of eucalyptus, which keeps dangerous and annoying bugs away from koalas.

claws and opposable fingers for climbing, so they usually stay in trees and away from danger. They do not make nests, but usually sleep in a tree fork or on a branch. The special bony plate in the koala's lower back allows it to rest comfortably.

If a koala happens to be on the ground, moving from one tree to another, and a predator notices him, the koala runs to the nearest tree and climbs very quickly. Then, he waits patiently for the predator to go away before moving again. Staying in one place for long periods is no problem, because koalas routinely sleep 18 to 22 hours per day.

Unlike many marsupials, koalas have pouches that open toward their hind legs. The female koala has

Furthermore, koalas rarely need to drink, because they get lots of moisture from their special food.

Koalas are some of the most endearing creatures God created, and they also give us great evidence of His perfect design.

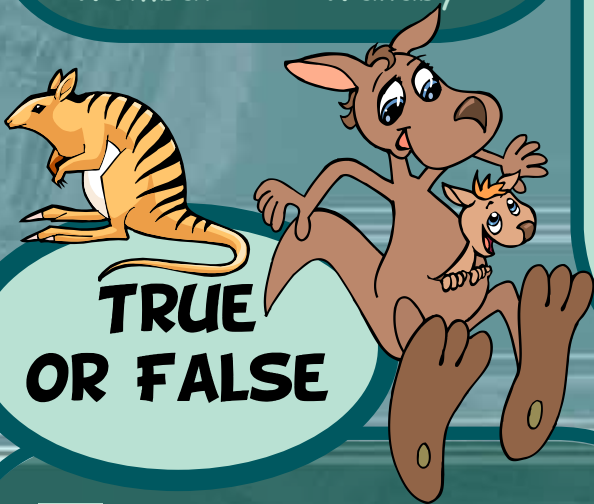


ACTIVITY PAGES

WORD SEARCH

H J T L D O M U T
 A M A D L S T I V K
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 B S M O I B O E I I S T R
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- | | |
|----------|-----------|
| Creation | Opossum |
| Koala | Marsupial |
| Kangaroo | Bandicoot |
| Wombat | Wallaby |



TRUE OR FALSE

- God gave a marsupial baby the instinct to wiggle across its mother's body until it finds her pouch.
- If God made opossums (which He did), we would expect them to stay the same and not evolve into other animals, which is exactly what the fossil record shows.
- Most marsupials are found in Africa.
- Kangaroos first evolved in Europe.
- Koalas have a special fiber-digesting organ called a fibertron.
- The marsupial wolf is now believed to be extinct.
- Male marsupials have very little to do with raising their young.
- A mother opossum can have up to 16 babies.
- Koalas often sleep 18 to 22 hours per day.
- The kangaroo's breathing is linked to its hopping action.



- When a baby opossum is born, it is about the size of a _____.
- A marsupial's pouch is called a "_____" from which we get the name marsupial.
- Nocturnal creatures are active at _____.
- The _____ is the largest living meat-eating marsupial.
- Baby kangaroos and koalas are called _____.

FILL IN THE BLANKS

- A marsupial that inhabits North America
- Animals that eat both plants and animals
- A one-celled human life form
- Animals that have a special pouch (or a fold of skin) where their babies continue to grow
- Animals that live entirely off of vegetation
- The biggest burrowing mammal in the world
- Meat-eating animals
- What koalas eat
- The only large animals that move from one place to another by hopping
- The God-given ability of a mother kangaroo to slow down or stop the development of a new baby until the previous joey is able to leave the pouch.

MATCHING

- | | |
|----------------------|---------------|
| A. marsupials | F. carnivores |
| B. herbivores | G. wombat |
| C. eucalyptus leaves | H. diapause |
| D. zygote | I. omnivores |
| E. opossum | J. kangaroos |



ON A SEPARATE SHEET OF PAPER



- Write down three remarkable things about kangaroos that point toward them being created by God.
- Explain where the phrase "playing possum" came from.

Dear Digger Doug,

I was wondering how dinosaurs got on Noah's ark.
 —Kaci, Somerville, TN

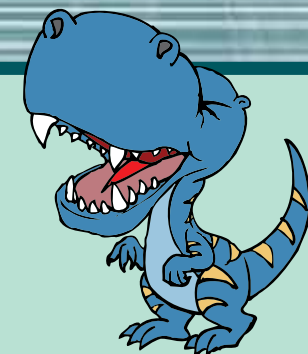
Dear Digger Doug,

Did Noah take any dangerous dinosaurs on the ark? If so, how did he keep them from hurting himself and the other animals?
 —Taylor, Fairhope, AL

Dear Kaci and Taylor,

I'm glad you sent these excellent questions about dinosaurs and Noah's ark. Dinosaurs were able to get on Noah's ark and stay there peaceably because God wanted it to be that way. Instead of thinking that Noah had to hunt lots of animals, including dinosaurs, we should remember that God brought the animals to Noah (Genesis 7:9-16). Also, consider that Noah did not have to take the biggest, scariest dinosaurs on the ark. Noah could have taken small, young dinosaurs, and still done exactly what God told him to do (Genesis 6:19-20,22).

Once Noah, his family, and all the animals were on the ark and God shut the ark's door, God remembered Noah and cared for him and his cargo (Genesis 8:1). God's providence ensured that animals such as dinosaurs did not kill Noah's family or each other. Also, remember that Noah had brought enough food (Genesis 6:21). In God's wisdom and power, He cleansed the Earth of evil while protecting His faithful servant Noah along with all kinds of animals.





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ADDRESS SERVICE REQUESTED

PLAYING POSSUM

Kyle Butt

You may have seen this interesting creature climbing a tree or lying on the side of the road. You might have seen one rummaging through your garbage. Its actual name is the Virginia opossum, but most people just call it a possum. Even though you might have seen a possum, you might not know how unique it really is.



The opossum is a marsupial, which means the females carry their babies in a pouch. The babies crawl into the pouch just 13 days after they are conceived. When they arrive there, they are only about the size of a honeybee. They stay in the pouch for about two months, then they move to their mother's back, where they

stay for another two weeks. Sometimes, a mother opossum can have 16 babies, so her back can get pretty crowded.

Evolutionists say the opossum is a "living fossil" because the fossils of opossums that are supposed to be 65 million years old look just like the opossums that are living today. The truth is, the entire Universe is only about 6,000 years old, so opossum fossils cannot be millions of years old. If God made opossums (which He did), we would expect them to stay the same and not evolve into other animals, which is exactly what the fossil record shows.



Baby Opossums

God gave opossums another unique ability. When they are threatened, they can go into a "coma" and pretend to be dead. Sometimes they can stay in their "dead" state for several hours. Because of this, many people use the term "playing possum" to describe someone who is faking something. Opossums are nocturnal. They are also omnivores, which means they eat plants and animals.

The next time you see a furry little pouched opossum, remember all the interesting things God designed it to do, and thank Him for giving us so many examples of His wonderful creative abilities.

ANSWERS

(vares); 8. C (eucalyptus leaves); 9. J (kangaroos); 10. H (diapause).
 devil; 5. Joeys, MATCHING: 1. E (opossum); 2. I (omnivores); 3. D (zygote); 4. A (marsupials); 5. B (herbivores); 6. G (wombat); 7. F (carni-
 TRUE OR FALSE: 1-T; 2-T; 3-F; 4-F; 5-F; 6-T; 7-T; 8-T; 9-T; 10-T. FILL IN THE BLANKS: 1. honeybee; 2. marsupium; 3. night; 4. Tasmanian
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