

# DESERT ANIMALS



# The Camel

When I'm hungry, I'll eat almost anything- a leather bridle, a piece of rope, my master's tent, or a pair of shoes.

My mouth is so tough a thorny cactus doesn't bother it.

I love to chow down grass and other plants that grow here on the Arabian Desert

I'm a dromedary camel, the one-hump kind that lives on hot deserts in the Middle East.

My hump, all eighty pounds of it, is filled with fat-my body fuel -- not water as some people believe.

My Mighty Maker gave it to me because He knew I wouldn't always be able to find food



As I travel across the hot sands.

When I don't find any chow, my body automatically takes fat from the hump, feeds my system, and keeps me going strong.

This is my emergency food supply.

If I can't find any plants to munch, my body uses up my hump.

When the hump gets smaller, it starts to tip to one side.

But when I get to a nice oasis and begin to eat again, my hump soon builds back to normal.

I've been known to drink twenty-seven gallons of water in ten minutes.

My Master Designer made me in such a fantastic way that in a matter of minutes all the water I've swallowed travels to the billions of microscopic cells that make up my flesh.

Naturally, the water I swallow first goes into my stomach.

There thirsty blood vessels absorb and carry it to every part of my body.

Scientists have tested my stomach and found it empty ten minutes after I've drunk twenty gallons.

In an eight hour day, I can carry a four hundred pound load a hundred miles across a hot, dry desert and not stop once for a drink or something to eat.

In fact, I've been known to go eight days without a drink, but then I look like a wreck.

I lose 227 pounds, my ribs show through my skin, and I look terribly skinny.

But I feel great!

I look thin because the billions of cells lose their water.

They're no longer fat. They're flat.

Normally my blood contains 94% water, just like yours.

But when I can't find any water to drink, the heat of the sun gradually robs a little water out of my blood.

Scientists have found that my blood can lose up to 40 % of its water, and I'm still healthy.

Doctors say human blood has to stay very close to 94 % water.

If you lose 5 percent of it, you can't see anymore;

If you lose 10%, you can't hear and you go insane;

If you lose 12%, your blood is as thick as molasses and your heart can't pump the thick stuff.

It stops, and you're dead.

But that's not true with me. Why?

Scientists say my blood is different.

My red cells are elongated.

Yours are round.

Maybe that's what makes the difference

This proves I'm designed for the desert,

Or the desert is designed for me.

Did you ever hear of a design without a Designer?

After I find a water hole, I'll drink for about ten minutes and my skinny body starts to change almost immediately.

In that short time my body fills out nicely, I don't look skinny anymore, and I gain back the 227 pounds I lost.

Even though I lose a lot of water on the desert, my body conserves it too.

Way in the beginning when my Intelligent Engineer made me, He gave me a specially designed nose that saves water.

When I exhale, I don't lose much.

My nose traps that warm, moist air from my lungs and absorbs it in my nasal membranes.

Tiny blood vessels in those membranes take that back into my blood.

How's that for a recycling system? Pretty cool, isn't it.

It works because my nose is cool.

My cool nose changes that warm moisture in the air from my lungs into water.

But how does my nose get cool?

I breathe in hot dry desert air,

And it goes through my wet nasal passages.

This produces a cooling effect, and my nose stays as much as 18 degrees cooler than the rest of my body.

I love to travel the beautiful sand dunes.

It's really quite easy, because my Creator gave me specially engineered sand shoes for feet.

My hooves are wide, and they get even wider when I step on them.

Each foot has two long, bony toes with tough, leathery skin between my soles,

My feet are a little like webbed-feet.

They won't let me sink into the soft, drifting sand.

This is good, because often my master wants me to carry him one hundred miles across the desert in just one day.

(I troop about ten miles per hour.)

Sometimes a big windstorm comes out of nowhere, bringing flying sand with it.

My Master Designer put special muscles in my nostrils that close the openings, keeping sand out of my nose but still allowing me enough air to breathe.



My eyelashes arch down over my eyes like screens, keeping the sand and sun out but still letting me see clearly.

If a grain of sand slips through and gets in my eye, the Creator took care of that too.

He gave me an inner eyelid that automatically wipes the sand off my eyeball just like a windshield wiper.

Some people think I'm conceited because I always walk around with my head held high and my nose in the air.

But that's just because of the way I'm made.

My eyebrows are so thick and bushy.

I have to hold my head high to peek out from underneath them.

I'm glad I have them though.

They shade my eyes from the bright sun.

Desert people depend on me for many things.

Not only am I their best form of transportation, but I'm also their grocery store.

Mrs. Camel gives very rich milk that people make into butter and cheese.

I shed my thick fur coat once a year and that can be woven into cloth.  
A few young camels are used for beef, but I don't like to talk about that.

For a long time we camels have been called the "ships of the desert" because of the way we sway from side to side when we trot.

Some of our riders get seasick.

I sway from side to side because of the way my legs work.

Both legs on one side move forward at the same time, elevating that side.

My "left, right left, right" motion makes my rider feel like he is in a rocking chair going sideways.

When I was six months old, special knee pads started to grow on my front legs.

The Intelligent Creator knew I had to have them.

They help me lower my 1000 pounds to the ground.

If I didn't have them, my knees would soon become sore and infected,  
And I could never lie down. I'd die of exhaustion.

By the way, I don't get thick knee pads because I fall on my knees.

I fall on my knees because I already have these tough pads.

Someone very Great thought of me and knew I needed them.

He designed them into my genes.

It's real difficult for me to understand . . .

How some people say I evolved into what I am now.

I'm very technical, highly engineered, dromedary camel.

Things like me don't just happen!



### **Activities**

1. Choose 5 amazing features of the camel's design and write a sentence on each.
2. List 3 ways in which camels help people.
3. How did people of the Bible use camels to help them? Choose one story and write a paragraph, e.g. Abraham finds a wife for Isaac.
4. Write an argument to show that camels were designed by God and did not evolve.

# The North African Desert Scorpion



The yellow fat-tail scorpion, or North African desert scorpion, *Androctonus australis*, spends much of its time at the surface. This exposes it to harsh sandstorms that can strip paint from steel, but the scorpion seems to be protected.

A study at a University in China found that the reason the scorpion can survive must be because of the scorpion's outer coat, called the exoskeleton. The team looked at it under a microscope, using ultraviolet light that makes the material glow in the dark.

They discovered tiny dome-shaped granules, so small that they could only be seen under the microscope. Then they tested the scorpion's armour pattern against smooth armour on a computer simulation.

They found that the domes deflected the air flow, which reduced the erosion rate by 50% compared with smooth. Then they tested real steel plates in a sandstorm, generated by compressed air. The nearest they could get to the scorpion pattern was grooves that were 2 mm apart, 5 mm wide, and 4 mm high. These grooves were much bigger than those in the scorpion's armour. Even this turned out to reduce the surface erosion by 20% compared with smooth steel. Not as good as the microscopic patterns on the scorpion exoskeleton, but still a big improvement.

Sand and dust particles cause millions of dollars of damage to helicopter rotors, turbine blades, and many other fast-moving surfaces, and it's much worse in the desert.

The university thought that if rough surfaces on the scorpion armour could protect the animal, then rough surfaces could also protect helicopter blades.

We have seen before how the bumps on humpback whales also greatly improve whales. Some fans have been modelled on them.

Scientists are making wonderful discoveries and advances in technology, but very often, like in the case of the rough surfaces on helicopter blades, they are

just making *copies* of something the original, made by the Maker of the universe.

**Reference**

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**Activities**

1. Look on a map and find out the name of the great desert in Northern Africa where you would expect to find this scorpion.
2. What are dome-shaped granules? Draw a scorpion's armour as you would see it under a microscope and draw the dome-shaped granules on the armour.
3. How does the rough surface on the scorpion's exoskeleton protect it?