



May-June 2010

## CAMELS - A DESERT MARVEL!

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Sporting one or two humps on its back, a bushy clump of hair on top of a small head, stumpy little ears, big bushy eyebrows, a groovy nose with a split upper lip, big yellow teeth, long legs with gnarly knee caps, and huge feet,



the camel has to be one of the more comical creatures living today. On top of all that, they have really bad breath, spit, and sway as they walk! Although they might look funny, each and every one of these parts was designed by God for a camel to be able to live in hot, dry desert climates.

The most unusual thing about a camel is their hump(s). The dromedary camel has one hump and is found in the Arabian deserts of North Africa and the Middle East. The two-humped Bactrian camel lives in the Gobi Desert in China and the Bactrian steppes of Mongolia. The camel's humps do not store water ... they actually store fat! When food and water are not available, the fat can be changed to energy and also into water. One gallon of fat can be changed

(metabolized) into one gallon of water. It is the fat being changed which allows a camel to go for several days without food and water. As the fat is changed, the humps become floppy and flabby. So if you see a camel with a sagging hump, you are looking at a very hungry camel!

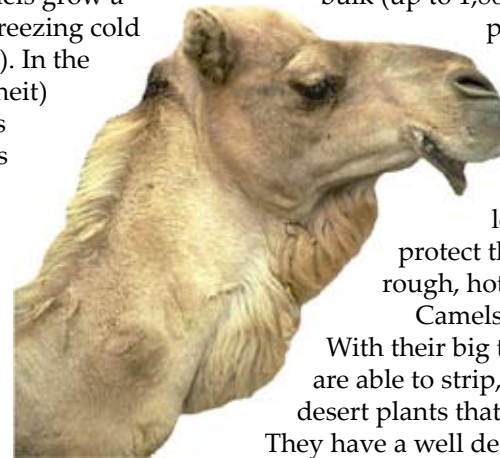
God has designed many other things to help the camel survive the heat and cold of deserts. Camels can grow to be 7 feet tall at the hump. The hump is sometimes 30 inches high. Camels have coarse hair on top to help them keep 10 to 20 degrees cooler in the hot sun. Their face and sides have short, fine hair which reflects heat and sunlight. In the winter, Bactrian camels grow a shaggy coat to protect them from the freezing cold (down to minus 20 degrees Fahrenheit). In the hot summer (up to 120 degrees Fahrenheit) they shed their long hair. The long legs of camels also help to keep their bodies further away from the searing hot ground.

God also designed the camels to save as much body water as possible. When desert conditions heat up, the camel can keep from sweating by increasing its body temperature (from 97.7 to 107.6 degrees Fahrenheit). Not sweating helps the camel save water. During the cool of the night its body is able to then lose the built up heat. The camel's kidneys take out as much water as possible from their urine. Their urine can become as thick as syrup and even turn into solid crystals which can have twice the salt content of sea water. So much water is squeezed out of the camel's droppings that they are dry enough to be burned immediately for fuel.

Camels can go for days without water. They have been known to safely lose water equal to 40% of their body weight. A loss of 15% body water would kill most other animals. When they do refill, camels can soak up water like a sponge. A thirsty camel can drink 30 gallons of water in only 13 minutes! Drinking this much and this fast would make other animals sick; however, the camel is able to do this because water is absorbed very slowly from their

stomach and intestines. Furthermore, their red blood cells (erythrocytes) can swell to 240% of normal size without bursting. Other animals can only go to 150%.

Camels have been called "ships of the desert." When they walk the front and back legs on the same side move forward together, creating a rocking motion similar to a rolling ship. Camels have been used by man for a long time (Genesis 12:16). Many people are still using camels for transportation. Camels can carry over 200 pounds for long distances in the hot desert heat. Their big, flat, and wide feet help them walk over rough rocky terrain and shifting desert sands without sinking under their own massive bulk (up to 1,800 lbs.) or the weight of heavy



packs. Camels can run up to 40 miles per hour in short bursts (as fast as a horse), and keep up speeds of up to 25 miles per hour for longer distances. Their legs have knee pads which protect them when they kneel on rough, hot desert sand.

Camels are mainly plant eaters. With their big teeth and split lips, camels are able to strip, grasp, and chew thorny desert plants that other animals will not touch.

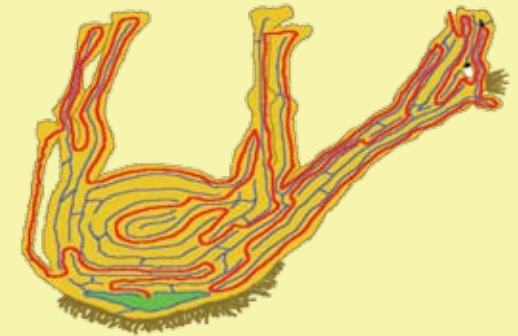
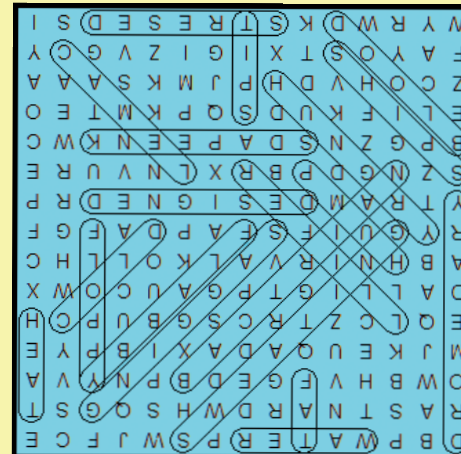
They have a well designed stomach divided into 3 parts. By spitting up the food from their stomach and re-chewing it, they are able to get the maximum amount of protein and energy from their meals. If a camel is annoyed or threatened it will spit at a person. It is not really spit but actually the contents of their stomach along with saliva they spew out!

Camels have a double row of very long, bushy eyelashes which helps to keep the sand and sun out of the eyes. They also have a clear inner eyelid which protects the eye from blowing sand, while still letting them see. Their small ears have hairs in the opening to help keep blowing sand out. The camel's nostrils are designed so they can be closed to keep out sand and help hold in moisture.

The chance and accident of evolution could never come up with an animal as well designed as a camel! Everything about a camel points to an intelligent designer. That designer is God!

Look for hidden words from the WORD LIST below. The hidden word might be up, down, sideways, slanted, or backwards.

BACTRIAN, BLOOD, CAMEL, COLD, DESERT, DESIGNED, DROMEDARY, FAT, FLABBY, FLOPPY, HEAT, HUMP, HUNGRY, KNEEPADS, REFILL, SAGGING, SHIPS, SPIT, SWEATING, WATER



Help the food and water through the maze to X to refill the hump of this hungry, thirsty camel.