

WELCOME

TO

ANIMAL DIVERSITY

DESERT ADAPTATION IN REPTILES

- Deserts are habitats characterized by a constant scarcity (limited availability) of water, absence of trees, and large wastelands covered in sand.
- Key features of deserts include: High temperatures Very low or sometimes absent rainfall Classification into hot and cold deserts
- Hot deserts: high temperatures (e.g., Rajasthan, Gobi, Sahara, Kalahari)
- Cold deserts: very low temperatures (e.g., Ladakh, Tibet, Alps)

Desert Animals



Bactrian Camel



South African Lion



Pronghorn



Desert Recluse Spider



Barbary Ostrich



Coyote



Sand Cat



Desert Tortoise



Desert Spiny Lizard



Desert Cottontail



Gila Woodpecker



Kit Fox



Tiger Rattlesnake



Golden Eagle



Desert Bighorn Sheep

Following are the Desert Adaptation

1. Behavioral Adaptation
2. Physiological Adaptation
3. Morphological Adaptation
4. Other Adaptation

1. Behavioral Adaptions

- Shuttling in and out of shade: Reptiles use shade to regulate their body temperature, moving between sunny and shaded areas.
- Inactivity: Reptiles spend long periods of inactivity in burrows during environmental stress.

Desert Reptiles

Some lizards can break off their tails to escape. The predator is distracted and eats the tail. The lizard eventually grows it back.



- ▶ Desert lizards called chameleons use camouflage to protect themselves from predators and to hide from their prey.
- ▶ Camouflage means they can change their skin color to match the surrounding area.

2. Physiological adaptation

- Water Conservation:

Thick, leathery skin: Reduces water loss through the skin.

Specialized scales: Some reptiles have scales that help to minimize water loss.

Recirculating Bladder Water: Some reptiles, like the Gila monster, can recirculate water from their bladders to avoid dehydration.

Temperature Regulation: Adjusting contact with the surface: Reptiles can adjust their contact with the hot surface to regulate body temperature.

Color Change: Some lizards can change color to absorb or reflect heat.

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3. Morphological adaptation

- Modified Appendages
- Burrowing: Some reptiles have modified appendages for digging burrows.
- Sand Movement: Some reptiles, like the sandfish, have adapted to move through sand in a swimming-like fashion.
- Camouflage:
 - Coloration: Desert reptiles often have coloration that helps them blend in with their surroundings.
 - Specialized Scales: Some reptiles have scales that help them hold onto rocky desert environments.

Stretchy Nostrils
- keep out the sand

Long Eyelashes
- help to keep sand
out of eyes

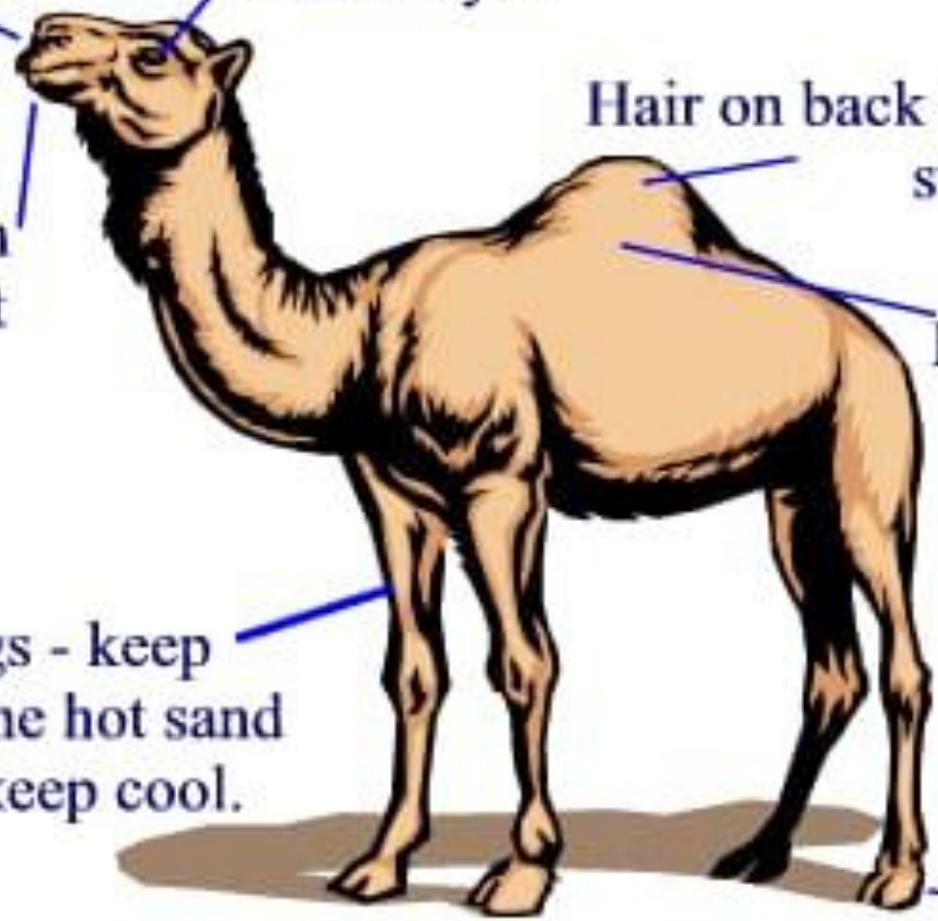
Leathery Mouth
- help camel eat
spiky plants!

Hair on back to protect against
sun!

Hump for storing
food!

Long legs - keep
camel off the hot sand
- help to keep cool.

Padded Feet
- stop sinking into
the sand and to protect
from heat of the ground



Other adaptation

- **Thorny Devil's Grooves:** Thorny devils have a hygroscopic system of grooves in their skin that lead to the corners of their mouth, allowing them to absorb water through capillary action.
- **Saharan Horned Viper's Horns:** The Saharan horned viper has horn-like scales above its eyes, which may protect its eyes from sand.

● **Thank you**