Hot And Cold Animals

Humans have not evolved to live at extreme temperatures. We need to use technology and clothing to keep ourselves warm or cool. Many animals have adapted to living in very difficult conditions.

Wood Frogs

Temperatures in Alaska can plummet to as low as -18°C for months of the year. Wood frogs have adapted to these temperatures by freezing solid. They pack their cells with sugar so that they aren't damaged. The frogs are so good at preserving themselves when frozen that they can last longer than many frozen meals. The record seems to be around seven months.

Red Flat Bark Beetle

These tiny beetles live all the way across North America and up to the Arctic Circle. This means that they have to tolerate hot American summers and freezing Arctic winters. They can survive at temperatures down to around -50°C. Their larvae can survive even lower temperatures. Some scientists believe that they can survive down to -100°C. To help them to survive, their blood is filled with something very similar to antifreeze in cars. This means that their blood doesn't freeze.

Pompeii Worms

Nobody knew that Pompeii worms existed until they were discovered in the 1980s. Scientists didn't think that animals could survive at extremely hot temperatures. Pompeii worms live near vents at the bottom of the ocean. Temperatures there

can reach 80°C. They are also very deep underwater. The water around the vents is extremely cold.

Sahara Desert Ants

Until Pompeii worms were discovered, the Sahara desert ant held the record for surviving at extremely hot temperatures. They can survive temperatures over 60°C. One of the ways they avoid overheating is by being very fast. This means that they aren't in contact with the hot sand for very long. They can run as fast as 90cm in a second. That's equivalent to a human running 360 miles per hour! It is the only ant that can gallop. This means all of its legs leave the ground when it runs, much like a horse.

RETRIEVAL FOCUS

1. How cold can it get in Alaska?
2. Which animals live in cold areas but don't freeze?
3. When did scientists discover Pompeii worms?
4. How fast can Sahara desert ants run?
5. Where do Pompeii worms live?

VIPERS QUESTIONS

S How do red flat bark beetles avoid freezing?

V Which of these words means "found"?

extremely deep discovered

S How does running fast help Sahara desert ants?

E How are Pompeii worms and Sahara desert ants linked?

V Which word tells you that the water around the vent is very cold?