A photograph of a person standing on a rock in a cave, holding a flashlight. The cave walls are illuminated with warm orange and yellow light, and a bright green light is visible in the background. The person is wearing a dark jacket and shorts. The overall scene is dramatic and mysterious.

# A WORLD UNDERGROUND

Susan Rose Simms

A photograph of a cave entrance leading to a beach and ocean. The cave's interior is dark and rocky, with the entrance forming a natural archway. Through the arch, a bright blue sky and a calm blue ocean are visible. A sandy path leads from the cave's interior towards the beach.

# A WORLD UNDERGROUND

Susan Rose Simms



high noon books

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# TYPES OF CAVES

Bears sleep in caves. Bats hang upside down in them. People used to live in them. But what makes caves form in the first place?

A cave is a hollow space formed by nature. It has an opening from the outside. The opening is big enough for a person to get through.

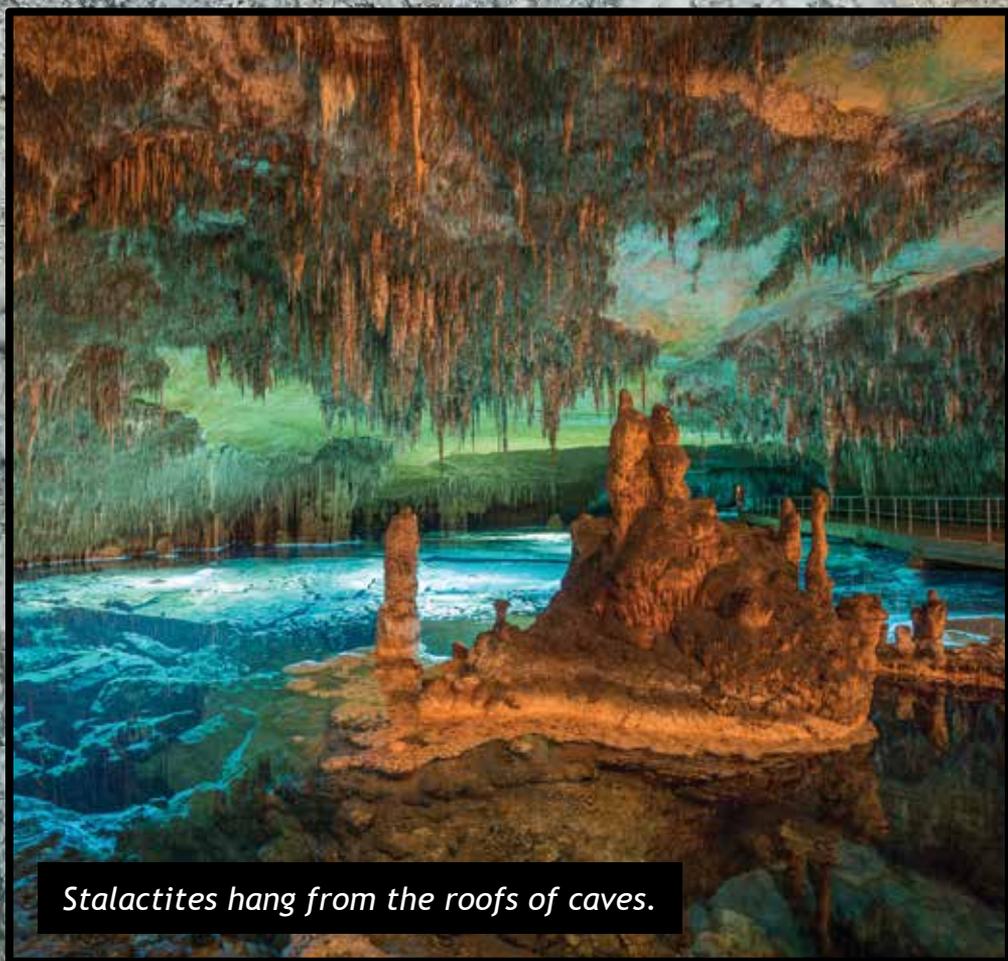
Caves are found in mountains and in deserts. They are found deep underwater and within **glaciers** (GLAY•shurs), which are thick rivers of slow-moving ice. Some are as small as a room. Others stretch for miles.





Most caves are formed in soft rock such as limestone. Moving water wears away the rock. Natural acid in the water makes tunnels. Carlsbad Caverns in New Mexico are this type of cave.

The water also forms **stalactites** (stuh•LAK•tytes) in limestone caves. Stalactites are posts of rock that hang from the roof. They're made from mineral salts left behind by dripping water.



*Stalactites hang from the roofs of caves.*

When the water drips onto the cave floor, the salts form rising posts of rock. These are called **stalagmites** (stuh•LAG•mytes).



*Stalactites and stalagmites can join after thousands of years.*

## CAVE FACT

Stalactites and stalagmites can join from floor to roof over time. However, they grow only around an inch every 100 years.

Water also forms caves in ice. Glacier caves are found in cold areas. Water running through or under the ice shapes these caves.



*Running water forms caves in ice.*

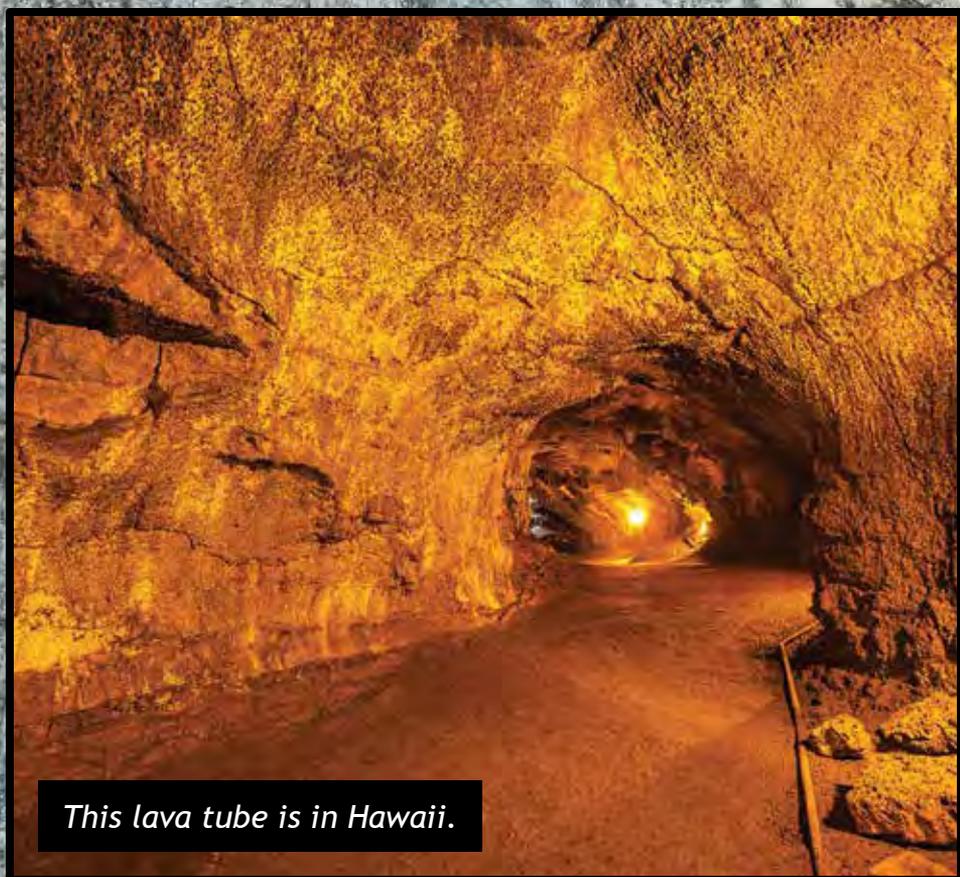


*Waves of sea water can make caves in cliffs, like this one in Phang Nga Bay, Thailand.*

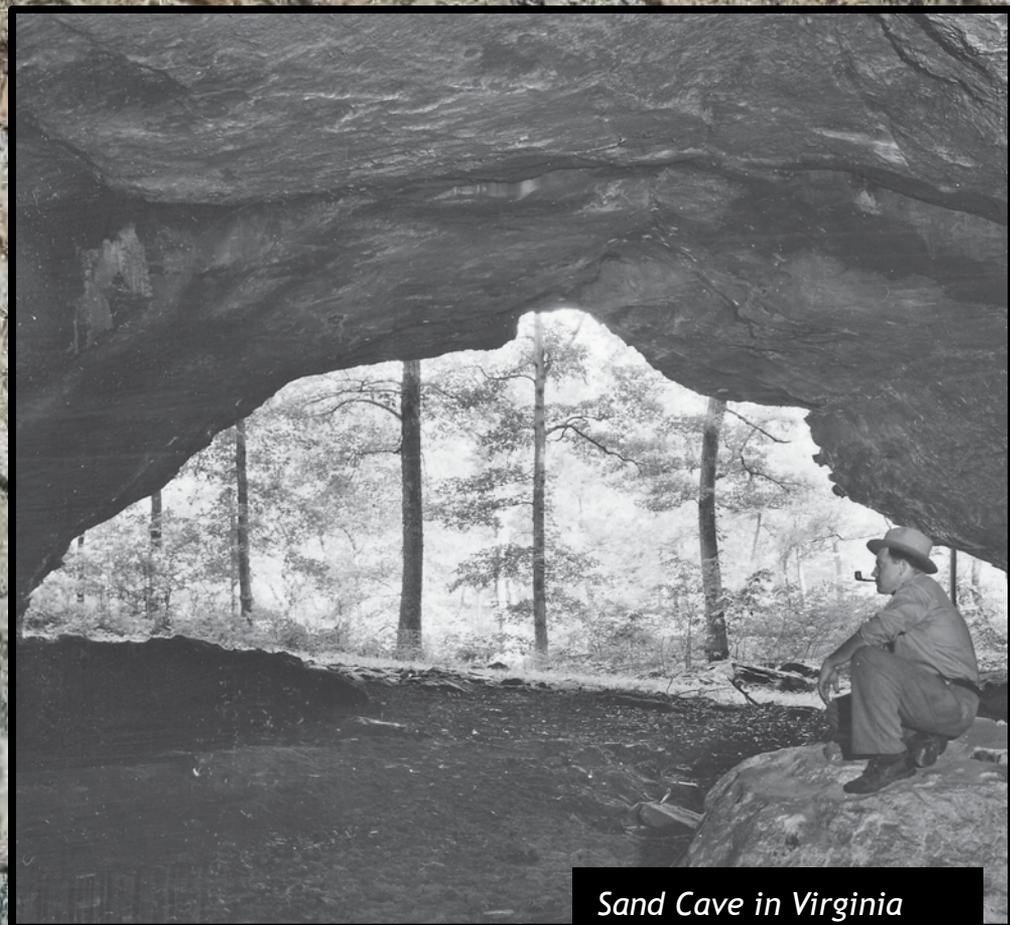
The sea carves out caves, as well. Sea caves are made when waves carrying sand and small rocks crash against sea cliffs. One sea cave is in Phang Nga (fang•GAH) Bay in Thailand (TYE•land).

Other caves come from **lava**. Lava is rock so hot that it has melted.

When lava cools, the top forms a crust like a roof. The lava below is still hot. It pours out, forming a tube. There are caves like this in the Canary Islands and Hawaii.



*This lava tube is in Hawaii.*



*Sand Cave in Virginia  
was formed by the wind.*

The wind makes caves, too. Sand blows against rocky cliffs, wearing them away. Sand Cave in Cumberland Gap National Park is a wind cave.

# CAVE DWELLERS OF THE PAST



*Paintings from long ago on cave walls show that people once lived there.*

Before people knew how to build houses, some of them lived in caves. Caves protected people from wind, rain, and snow. They were a safe place to store things such as tools.

People painted pictures of their lives on cave walls. A few of those can still be seen all these years later.

Scientists (SYE•en•tists) know that people lived in caves, because they have found **fossils**. Fossils are very old remains of living things.

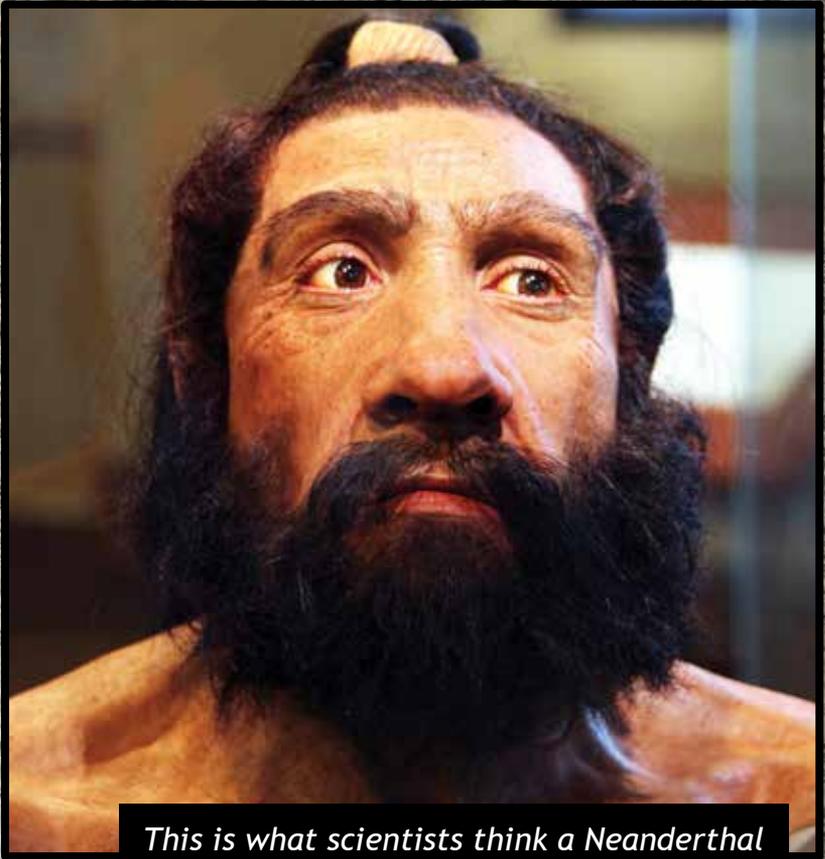


*These early human bones were found in a cave.*

In a cave in Morocco, scientists found fossil bones of humans. People lived in this cave around 300,000 years ago. They built fires to keep warm. They made tools and hunted. Some also died there.



*A scientist in Morocco points to a human fossil found in a cave there.*

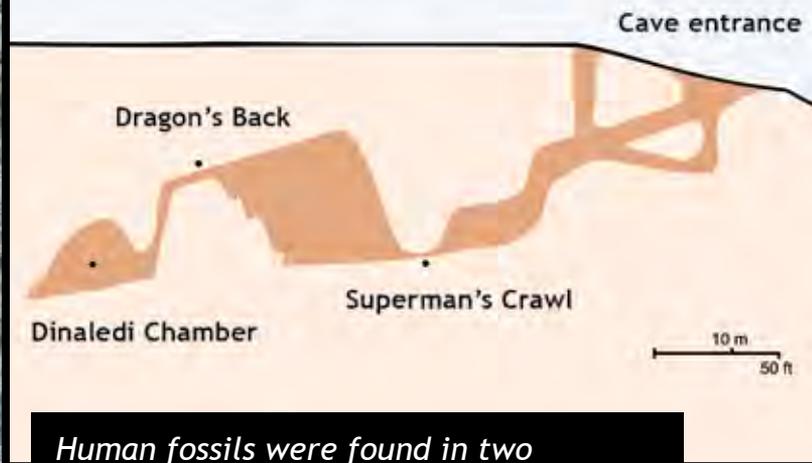


*This is what scientists think a Neanderthal man might have looked like.*

In 1856, the first Neanderthal (nee•AN•der•tal) fossil was discovered in a cave in Germany. Neanderthals were early humans. They lived in small groups. They, too, made fires, hunted, and made tools.

Human fossils that are 335,000 years old were found in the Rising Star Cave in South Africa. Those people were like modern humans. Their bones tell scientists about their habits and about foods they ate.

## Cross-Section of the Rising Star Cave System



*Human fossils were found in two different caverns of the Rising Star Cave.*



*These shaped rocks were found in Blombos Cave in South Africa. Scientists think they were used as tools by early humans.*

## CAVE FACT

Humans lived in Blombos Cave in South Africa from 95,000 to 55,000 years ago. Scientists found shells there from shellfish used as food, as well as shells made into beads. They also found marks on stones that might be an early type of writing.