

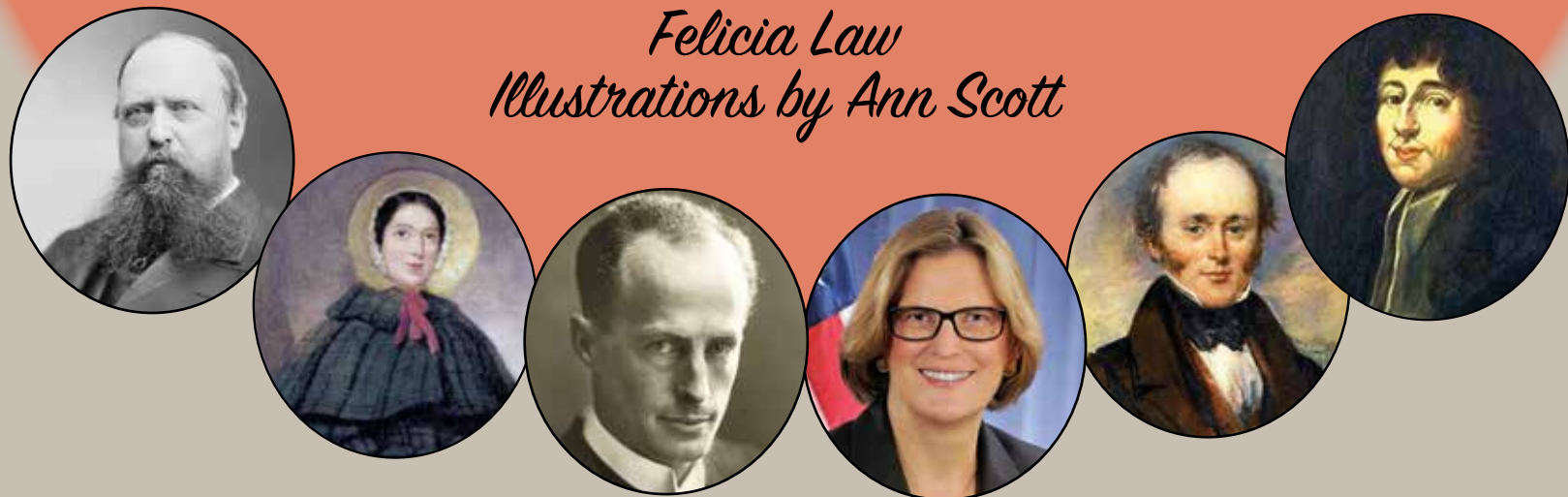
*The GREATS – the men and women who made science
– and who are still making it today*

THE GREATEST EVER



Geologists

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Walcott, Anning, Buckland, Leakey, Agassiz, Alvarez, Tharp, Xing

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Geology gets started



Xenophanes

Xenophanes was a Greek who lived back in the 5th century BC. He was the first to state that shells found in rocks on land that was far from the sea meant that the areas had once been covered by water.



Aristotle

Aristotle was also a Greek, who lived a hundred years or so after Xenophanes. He observed that the formation, or geology, of the Earth was changing, but at a rate too slow for humans to observe.



Theophrastus

Aristotle's colleague Theophrastus collected and described minerals and ores from rocks taken from mines near the capital, Athens. He could see that some, such as marble, were hard rocks, while others, such as limestone, were more likely to crumble.



Shen Kuo

Shen Kuo was a Chinese naturalist and geologist. As early as the 11th century, he used the discovery of bamboo and seashell fossils to support his theory that the land changes shape over long periods of time. He observed layers of sediment in tilted rock, soil erosion, and marine skeletons found in the Taihang Mountains, located far from the Pacific Ocean.

Nicolas Steno

*who discovered how rocks form
from spreading layers*



Nicolas Steno was born in Copenhagen, Denmark, into the family of a goldsmith. After suffering illness as a child, he decided to study medicine at university. Later, he developed skills in medical anatomy.



During his travels through France, Germany, Italy and the Netherlands, Nicolas met many famous scientists. And, while still a young man, he became doctor to Grand Duke Ferdinando of Florence in Italy.

While he was in Italy, two fishermen caught a huge female shark, and its head was sent to Steno to study. He noted that the shark's teeth looked very like certain stony objects found embedded deep in layers of rock. He made the connection that the teeth and the stony objects came from the same source. The stones were the bony remains of animals that had become pressed under layers of soil and turned to rock over a long period of time. Today, we call these remains fossils.



Fact Box
(1636-1686)

Nicolas Steno was one of the first geologists to understand how layers of rock were formed, how they settled one upon the other over time, and how they sometimes met and became tilted.

This branch of geology is known as stratigraphy.

An illustration from Steno's studies comparing the teeth from a shark with a fossil tooth