

WORDS BY
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THE RIDDLE OF THE TONGUE- STONES

*How Blessed Nicolas Steno Uncovered
the Hidden History of the Earth*

ILLUSTRATIONS BY
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The origin of tongue-stones and other fossils had puzzled thinkers since ancient times. Fossils that resembled shark teeth and seashells were commonly found in places miles inland and high above sea level, even on mountaintops! How could this be?

WORD STUDY

#010

Petrify

To transform the remains of a living creature into stone by the slow natural replacement of its cells and tissue with mineral deposits.

in solid rock far from the ocean. Some people speculated that fossils fell from the sky, but the most common opinion was that the strange rocks simply grew in the earth, sprouting up from the

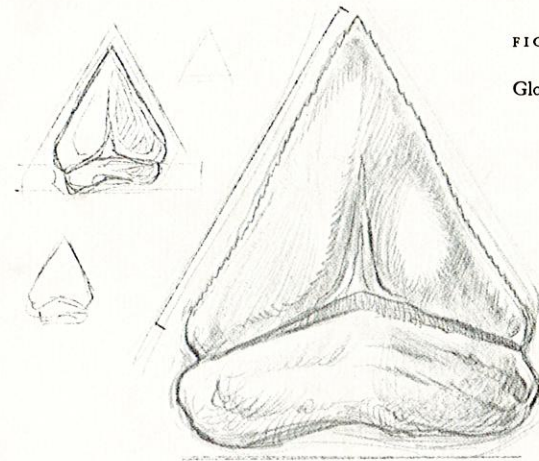
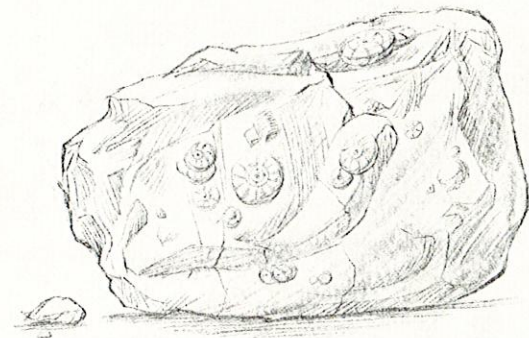


FIG. 6.

Glossopetrae (shark teeth)

FIG. 7.

Fossils



ground like plants. This idea may seem foolish to us today, but in the seventeenth century, scientists were just beginning to understand the power of invisible natural forces, such as magnetism. Who could say what unknown energies were at work in the depths of the Earth? Perhaps one of these invisible forces was responsible for the formation of fossils.

As for himself, Steno was unconvinced by these arguments. After a careful side-by-side comparison of tongue-stones with the teeth of the duke's

great white shark, Steno theorized that fossils were the bones, shells, or teeth of living organisms that had mysteriously turned to stone.

But how was this possible?
And how had the fossils of sea creatures come to rest on the tops of mountains?

WORD STUDY

#011

Organism

An individual living creature, such as a plant, animal, or fungus.

Steno's unquenchable curiosity and intense concentration became absorbed in solving the riddle of the tongue-stones.

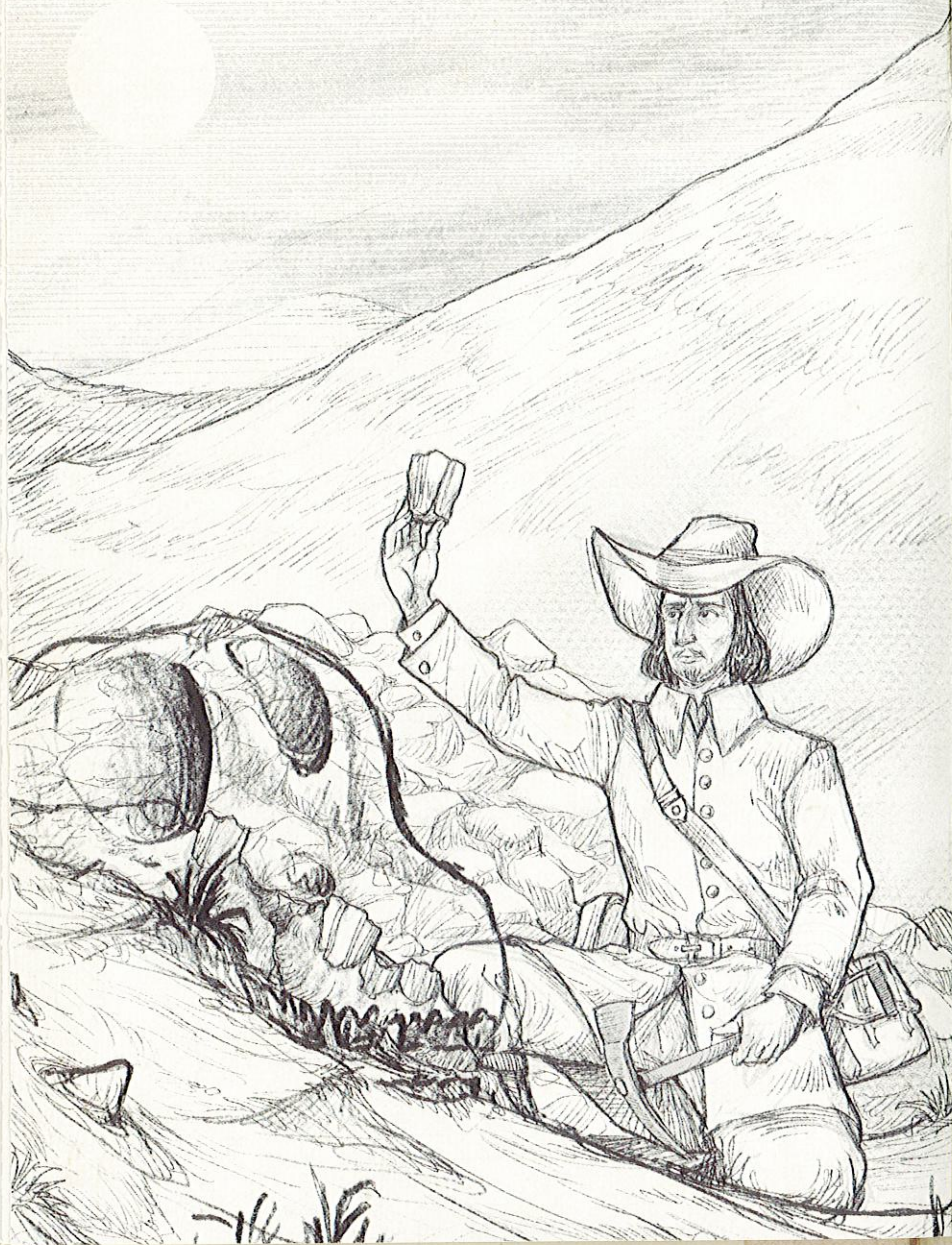
Steno was certain that the Earth itself held the answer. He quickly realized that he couldn't investigate the mystery of fossils unless he could first explain the origins of the rock formations that contained them. To do this, he went out into the field himself to make a firsthand survey of the places where these objects were found. He made extended trips across Tuscany, down to the seashore and up into the mountains, hunting relentlessly for fossils. Steno no longer fretted about his wandering curiosity. Instead, he felt a renewed confidence and a growing sense of purpose.

WORD STUDY

#012

Geology

A branch of geoscience particularly concerned with the rocks and minerals on the earth's surface and within the planet's crust.



THE RIDDLE OF THE TONGUE-STONES

At this time, there were no detailed theories about the origin and history of planet Earth. Geology as we know it did not yet exist. The very idea of documenting prehistory, events that took place long before written records, was unheard of. Almost no one had any clear idea how mountains or valleys or continents were formed. It was assumed that the Earth had remained largely static since the beginning of time. Any changes that had occurred since then were thought to have been caused by chaos and disorder that spoiled God's originally perfect creation.

But when Steno looked at the hills and valleys of Tuscany, he didn't see chaos and ruin at all. His keen anatomist's eye saw how the rock formations and the features of the landscape all fit together in a logical

WORD STUDY

#013

Static

*The characteristic of being
unchanging or inactive.*

soon attracted attention, both good and bad. His friends believed he was a holy man: a living saint. But just like in Münster, his good example made him many more enemies, who were scandalized and offended by his saintly demeanor. Some of these people even began to send Bishop Steno death threats!

Steno persevered despite all these setbacks and frustrations. He even found time to revive his studies of anatomy. He began taking notes for a new paper about the nervous system. But the constant pressure of his many responsibilities was slowly wearing him down.

Demoralized and weary, Steno wanted to return to his beloved Florence for a period of rest and recuperation. But he changed his mind and chose to stay in Germany when a new opportunity opened up to serve Catholics in the city of Schwerin, who were in need of a priest to revive their struggling community.

This new assignment was to be his last. During his time in Germany, Steno's health had begun to decline. He lost weight and was stricken with chronic discomfort in his stomach. One day, he suddenly collapsed in terrible pain and was carried off to his bed by his staff. In spite of his suffering, Steno managed to write his will and a few final letters to friends and colleagues. As his strength ebbed away, he recited the prayers for the dying in the company of his assembled household. The brilliant scientist and tireless servant of the Church went to his eternal reward on November 25, 1686. He was forty-eight years old.

In Tuscany, the Grand Duke Cosimo III, the son of Steno's friend the late Ferdinando II de' Medici, sent for Steno's body to be returned to Florence and laid to rest in the crypt of the beautiful Basilica of San Lorenzo. His remains have since been moved to a small side chapel called the Capella Stenoniana—Steno's Chapel—where his limestone sarcophagus can be seen today.

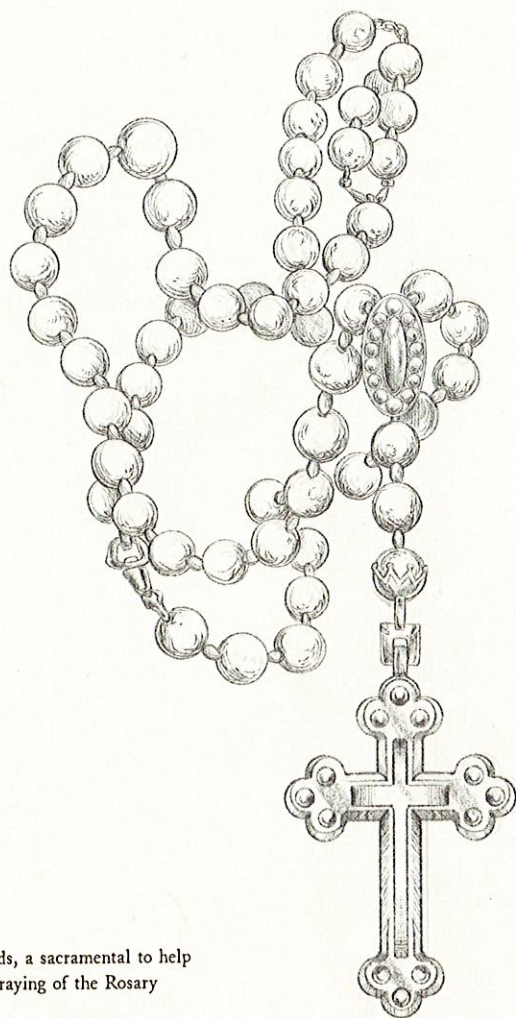


FIG. 14.

Rosary beads, a sacramental to help guide the praying of the Rosary

WORD STUDY

#024

Sarcophagus

A stone coffin, typically decorated with inscriptions or sculptures.

In 1938, three hundred years after the holy anatomist was born, Pope Pius XI received a delegation of Danish Catholics who petitioned the Holy Father to

officially canonize Nicolas Steno as a saint of the Catholic Church. The pope gave his permission for an official investigation into Steno's life and works, and the process of collecting information began soon after in Osnabrück, Germany.

Fifty years later, on October 23, 1988, Pope John Paul II presided over Steno's Mass of

WORD STUDY

#025

Canonization

A declaration by which the Catholic Church recognizes that a deceased person is a saint in heaven, worthy of public veneration by the Christian faithful.