Underground World & the man who (thought he) knew everything

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Often described as the man who knew everything, Athanasius Kircher (1602–80) was a German Jesuit polymath of international renown during his own lifetime. He was a prolific author with an astoundingly broad range of interests, writing about everything, from geology and geography to sinology and egyptology, biology, medicine, engineering, theology, anthropology, music theory and linguistics.

Title-page engraving for Kircher's *Mundus Subterraneus,* 1665. The earth surrounded by the twelve winds and the title banderole flanked by female personifications of the liberal arts, geometry and astronomy. [for a high-res 'zoomable' version, see CUL Digital Collections.]

This article is the second in a new series called **5-minute books** – concise articles that can be read in under 5 minutes.

Of his more than forty published works, my favorite is his textbook *Mundus Subterraneus* ('Underground World'), first printed in Amsterdam in 1664. He was the first, at least in print, to describe how igneous rock is formed. He speculated about the causes of volcanic eruptions and believed that the interior of the earth was not solid but traversed by "subterraneous burrows and passages" churning with oceans of fire and water, that all led to the center of the earth. In this regard his hypotheses, although a little off the mark, were informed by real-world observation – he had climbed down into the sulfurous, smoking crater of Mount Vesuvius, just

seven years after its most recent eruption in 1631.

A two-legged Swiss dragon. Image thanks to the Cornell University Library.

He also witnessed the eruptions of Etna and Stromboli while on a visit to Sicily in 1637–38. Kircher also imagined that dragons inhabited earth's interior, both the regular four-legged kind and a two-legged Swiss version or *Draco Helveticus.* He also professed to know the location of the lost city of Atlantis – in the Atlantic, half-way between Africa and the Americas, if you were wondering.

Subterranean fires from the third edition of *Mundus Subterraneus,* 1678.

Subterranean waters and central fire from the third edition of *Mundus Subterraneus,* 1678.

Mundus Subterraneus is a rather typical seventeenth-century book in terms of its design; its format, layout and typesetting is pretty much standardized: monochrome, mostly quarto or similar size, roman and italic fonts and with all the accoutrements of modern books; e.g. running heads, page numbers, a table of contents and an index. Owing to the broad range of Kircher's interests, and his propensity to go off on tangents, many of his books are typographically complex, with some employing quite a number of fonts, including Arabic, Hebrew, Greek, roman and italic (sometimes all on the same page). His books are mostly illustrated with woodcuts but when greater detail and shading are demanded, then metal engravings appear too.

“Nothing is more divine than to know everything.”

—Plato, as quoted by Kircher in *Ars magna sciendi* (1669)
Mundus Subterraneus proved incredibly popular, and was issued in three editions within three years. A much abridged English translation appeared in 1669, published in London, with the charming title, *The Volcanos: Or Burning and Fire-vomiting Mountains, Famous in the World.*

Although all editions were printed monochrome, a number of beautifully hand-colored copies have survived. This engraving of Mount Etna during eruption, in a rare contemporary colored copy, is from a 2016 Christie’s sale. It sold for $180,000.
Kircher combined something of the breadth of learning of the great medieval encyclopedists with an insatiable curiosity. Perhaps we might forgive him his hubris and choose to remember him principally as a **champion of wonder** – something we might all aspire to.