

(gas)

In the ancient world, an oracle was a person or an agency who was believed to have insight to the future because of its unique access to gods. Delphi was an important ancient Greek religious sanctuary sacred to the god Apollo, the god of prophecy. Therefore, the Oracle of Delphi, or the Pythia, at the temple of Apollo was naturally the most important oracle in ancient Greece. In Greek mythology, Oedipus, the king of Thebes famous for killing his father and marrying his mother, first learned of his tragic destiny through the Delphic Oracle in his youth. Despite all his efforts, Oedipus ended up unknowingly fulfilled the prophecy. Oedipus was not the only **person** to seek guidance from the Delphic oracle. For at least a thousand years, this powerful oracle **attracted** rulers of Greece, Persia and the Roman Empire to make the journey to the mountainous town of Delphi and seek for guidance on both personal and imperial issues.

The ancient Greeks believed that the power of the Delphic oracle was derived from a mysterious vapor rising from the earth. **Many ancient texts on the Delphic oracle linked its power to natural features around the temple.** For example, Greek geographer Strabo mentioned a fissure from which a vapor that was thought to inspire the Oracle arises. Additionally, historian Diodorus of Sicily described a spring making the Pythia prophetic. There were also interesting details such as the fact that oracle did not operate during winter. However, most modern scholars considered this belief to be false. () In the article published in Clinical Toxicology, scientists from multiple disciplines worked together and backed up those testimonies using geological and chemical evidences.

The scientists first argued that there were gases emitted and transported to the temple. The temple of Apollo is located directly above the intersection of two major faults and one of them had frequent earthquakes and landslides. Meanwhile, the foundation for the temple is a limestone formation containing much bitumen (oil). Constant collision in the tectonic layer

heated and vaporized the constituents in the bituminous layers, thus forming hydrocarbon gases that mostly rose to the surface and eventually dissolved in the springs. There are three springs that flow directly under the temple itself. The floor of the temple was earthen as opposed to the standard stone floor. This helped to create a ground vent and allowed the gas to eventually reach the Pythia in the temple. Chemical analysis on water samples from those springs have identified the trapped gases as mostly hydrocarbon gases such as ethylene, methane, and ethane, with a highest concentration of the first.

Ethylene was once widely used as an inhalational anesthetic gas; It is also capable of inducing an altered mental state. Pythia was said to have two distinct states when intoxicated. The first is the calm and relaxed woman able to respond to questions; The second is the woman in a frenzy. Both states align with intoxication by ethylene and the early stage of anesthesia. Additionally, the sweet odor of ethylene is consistent with the “sweet smelling vapor” described in ancient texts by the Greeks.

Were the highly sought prophecies by the Delphi Oracle just hallucinations induced by an anesthetic gas? Although the problem is still not fully solved, the arguments did bring in a new perspective and might motivate further investigation on this theory.