



Crystal, an object of desire

From the earliest time, humans have been aware of rocks/stones emanating from the centre of the Earth of an incredible variety of shapes and sizes. Multifaceted crystals, in particular, inspired wonderment. They were called "*stars from the centre of the earth*".



Stones and crystals in caves with different forms. Source : Institut Néel-CNRS

A multitude of shapes

These "stones" came in a multitude of shapes, sizes and colours. They sometimes took the form of unusual "angular stones", with flat, smooth sides, as if manufactured. Some of these became known as "Crystal".

A multitude of colours

Their fascinating colours, shapes and sizes naturally attracted mysticism: crystals were talismans of supernatural powers supposed to offer healing and protection...

The colour, transparency, rarity and stability of certain stones made them precious objects that were used in jewels and gems. They became symbols of power and wealth.



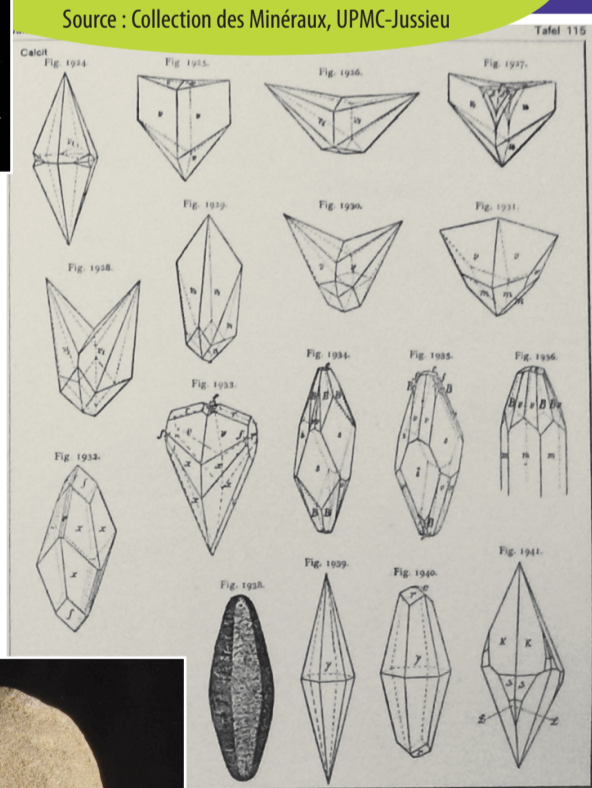
Clear « hedgehog » quartz or « rock crystal » - Isère
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Crystal: a word meaning cold
The etymology of the word "crystal" provides an indication of the first approach used to determine the origin of these stones. This word comes from the Greek "krystallos": meaning "ice". Could rock crystal actually be water that has been subjected to such an intense level of freezing that it has been converted into permanent ice?
This analogy between rock crystal and other transparent materials can be found in crystal glass... which is truly a **glass** but **not a crystal** from a scientist point of view.



Calcite - Isère © Muséum d'Histoire Naturelle de Grenoble

Page from the *Atlas der Kristallformen* 1913-1923 (20 volumes!) where **Victor Goldschmidt** has drawn 2544 different form of calcite.
Source : Collection des Minéraux, UPMC-Jussieu



Calcite - St Marcellin Isère
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Elbaite, © Muséum d'Histoire Naturelle de Grenoble



Fluorite © Muséum d'Histoire Naturelle de Grenoble

Crystal: a definition that has evolved

- In the 18th century the term crystal was used by scientists to describe any **angular stone** with specifically orientated plane surfaces.
- In the early 19th century, crystal referred to any **homogeneous solid material** characterized by planar faces.
- In the 20th and 21st centuries the term crystal refers to any material whose atoms are arranged in an **ordered pattern**.