

More about alabaster and travertine

When geologists, archaeologists and the stone trade all use the same names but for different rocks, then things can be very confusing. This brief guide explains how the different terms are used.

Alabaster of geologists

Let's start with 'alabaster'. Modern geologists use this name for the compact fine-grained variety of gypsum, a mineral composed of hydrated calcium sulphate. Thick beds of gypsum formed at various times in geological history by the evaporation of sea water.

Gypsum is soft and when it forms fine-grained masses, it is very suitable for carving. Faustino Corsi calls this stone by its Italian name, 'gesso', and gives it a class of its own in his collection.

Important sources of gypsum 'alabaster' are in the areas of Volterra and Castellina Marittima in Tuscany, Italy, and in the Midlands of England.

In medieval times, the carving of English alabaster reached factory proportions, and monuments and statues made from the stone are seen in churches across Europe.



545. Volterra alabaster
(gypsum)



Alabaster of archaeologists

There is uncertainty as to whether the name 'alabaster' comes from a place of that name in ancient Egypt, or from the small ointment jars called 'alabastris' that were made there. Either way, the original use of the term alabaster was for a fine-grained banded deposit of calcite, a mineral composed of calcium carbonate, which was obtained from Hatnub, Mallawi, and other locations in the Nile valley. It was deposited as flowstone, stalagmites and stalactites in extensive cave systems. Similar compact banded rocks are deposited by hot springs. Archaeologists refer to rocks formed by both mechanisms, as 'alabaster'. Corsi does the same.

Alabastris from Egypt.

Corsi Collection
of
Decorative Stones

www.oum.ox.ac.uk/corsi

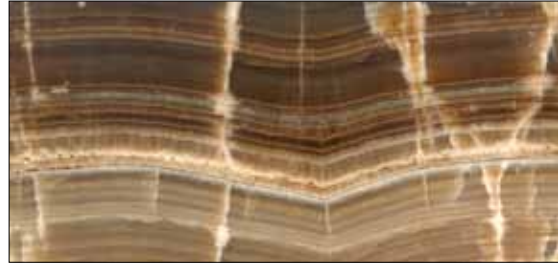
Geologists would refer to these stones as compact banded travertine, but might use the term 'oriental alabaster' to distinguish it from the gypsum alabaster.

Onyx marble

In the stone trade, these rocks are widely called 'onyx marble' Yet again there is scope for



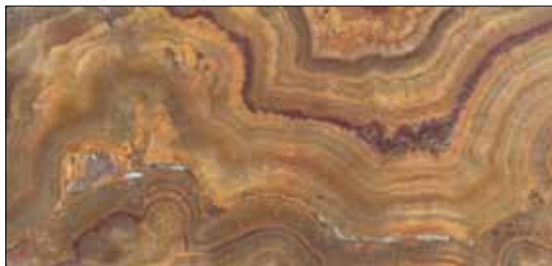
312. Egyptian alabaster from the Nile Valley, Egypt.



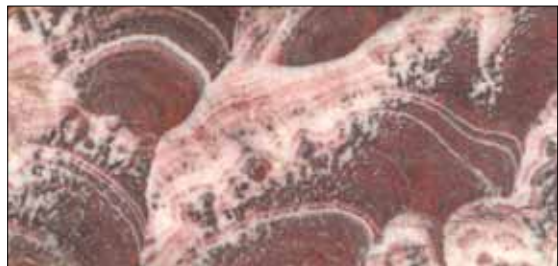
317. Alabastro tartaruga from Tuscany, Italy.

confusion, since geologists use the name 'onyx' for a kind of agate, a much harder banded rock composed of the mineral quartz. The name 'marble' is used by geologists for metamorphosed limestones and dolostones, rocks composed of the carbonate minerals calcite and dolomite. When the terms 'onyx' and 'marble' are put together, the term 'onyx marble' always refers to compact banded travertines, the 'alabaster' of archaeologists.

Rocks deposited in cold-water cave environments tend to be relatively pure in composition, and are typically colourless, white or brown. Travertines deposited by hot springs may be richly patterned by bushy growths tinted red, yellow and brown by iron oxides, the result of the action of cyanobacteria living in the warm water.



317. Alabastro fiorito from Pamukkale, Turkey.



331. Alabastro a pecorella from Oran, Algeria.

Travertine from rivers

Travertines can also be deposited by flowing rivers, and the stone deposited by the Aniene River in the area of Tivoli, outside Rome, is particularly famous. The stone has been used extensively in the buildings of Rome, where the ancient Romans discovered one of its more desirable properties. When it is freshly cut from the ground, it is relatively soft, but over time it weathers to a harder, more durable stone. Tivoli travertine has been exported all over the world and is widely seen in our towns and cities. It can be recognised by its banded but rather holey structure. Holes form where plant material trapped in the travertine, has decayed away.

Today, the holes are often filled with resin by the stone trade to make the stone easier to work.

Travertines that have a particularly holey porous structure are known as tufa. They are lightweight rocks that are not suitable for ornamental use.



14. Travertino di Tivoli *from Tivoli, Rome.*

Corsi's 'tartari'

Corsi has a batch of samples which he calls his 'tartari', which are very finely banded in different shades of brown, and are composed of particularly slender calcite crystals. The name 'tartaro' is probably derived from the stone's resemblance to the encrustations of potassium bitartrate ('tartar') deposited in wine casks during fermentation. It has also been suggested that Corsi's samples are named after Lago di Tartaro, a location close to Tivoli, although contemporary descriptions of the lake refer to the porous tufa that was obtained there.



382. Tartaro di Terni, *from Terni, Umbria, Italy.*

Corsi writes in his catalogue that his tartari were deposited by water spray from the waterfalls at Tivoli and Terni, but it seems he was misled. The first volume of the 18th century Dizionario Corografico... della Italia (pp.167-168) describes how these stones were cut from the calcium carbonate deposits of aqueducts. The filthy mud was washed off to reveal the most beautifulmost beautiful stones.

Calcite alabaster in the wall decoration of St Peter's Basilica in the Vatican City.



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