

# Dubrovnik Embrasures

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The north-western walls of Dubrovnik, a fortified mediaeval city at the southern extent of Croatia, were constructed during the first half of the 14th century. This element of the walls is some 10 or more metres thick with at least an upper and lower gallery running within the walls underneath the ramparts (*Figure 1.*)

Inside the lower of these two galleries, a gallery whose floor is of the bedrock upon which the walls are founded, are located a number of defensive embrasures.

The wall is constructed entirely of limestone blocks. The lower gallery in this section of the wall forms part of a museum dedicated to the preservation and display of the earliest weapon manufacturing foundry which had been constructed and operated in portion of this gallery.

*Figure 1: Fortified walls of Dubrovnik, Croatia (right)*



The curiosity of the various embrasures is that they have, by virtue of the downward trickling of rainwater (through joints in the limestone blocks) come to resemble small caves because of the hundreds (if not thousands) of straws that have grown on the roof of each of these embrasures. This can clearly be seen in the image in *Figure 2*, one taken from the gallery into one of these defensive embrasures.

*Figure 2: Speleothems on the roof of one of the embrasures (left)*

Incidentally, an examination of the length of the longest of these formations (approximately 6 or 7cm being my estimate) confirms the general proposition regularly advanced by cave guides as a truism that such formations grow at a rate of approximately 1 cm per century – the 6 or 7 cm length confirming the time between the construction of the wall in the mid-14th century and my inspection of these embrasures some nearly 700 years later in May of this year).

The correctness of this general assertion is the subject of commentary by Andy Spate elsewhere in this edition. However, in light of the age of the walls here discussed, the formations shown cannot be older than seven centuries or so!

Note: see the ANDYSEZ article on page 30 for further discussion on speleothem dating and its difficulties

