

Millennium-old olive trees of the Iberian Peninsula are younger than expected

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Researchers take samples of the trunk of an olive tree (*Olea europaea*). Credit: CREAM

Northeast Spain is home to olive trees so old that they are known as "millennium-old." A group of scientists have now studied their age. The oldest is to be found in the Catalan region of Montsia and is 627 years old making it one of the oldest olive trees recorded in Europe.

Due to the large size of the olive trees in the [Mediterranean region](#), many experts have claimed that they are [millennia](#) old but "there had never been a scientific study to verify this," as explained to SINC by the ecologist Bernat Claramunt from the Centre for [Ecological Research](#) and Forestry Applications (CREAF).

A team from this centre has now analysed the ages of the famous olive trees and the oldest found is 627 years of age. Claramunt states that "this is one of the oldest [specimens](#) recorded in the Mediterranean ecosystem and on the European Continent."

Lead by Jordi Martínez-Vilalta, the CREAM researchers employed classic dendrochronology methods based on the analysis of growth rings in the tree trunks. The study has been published in the *Dendrochronologia* journal.

The scientists analysed 14 olive trees (*Olea europea*) from the coastal region of Montsià in Catalonia. As Claramunt explains, "we use a technique that allows for the extraction of a small cylindrical piece of the trunk which goes from the bark to the core of the tree. This sample contains the life history of the tree." They also studied entire sections of the trunk that had been previously carved out.

Obtaining results from trunks is not easy. Claramunt warns that "there are times when the rings are hardly visible or they do not follow a known time pattern. The olive tree could also be too twisted."

The data from this study can also be useful when reconstructing the climatic conditions of the last few centuries. "As well as dating these olive trees, we have shown that this type of tree can be used for dendrochronological analysis," outlines the expert.

The legend of the millennium-old olive tree

The olive trees that captivated the famous Spanish poet Antonio Machado come from a variety that was cultivated in Palestine 6,000 years ago. This species spread West throughout the Mediterranean thanks to the Phoenicians, the Etruscans, the Greeks and the Romans. It is believed that they started to be cultivated in the Iberian Peninsula

some 4,000 years ago.

There are at least 17 tree species in the world that can live longer than one thousand years and nearly all of them are conifers. The oldest known are the pine trees (*Pinus longaeva*) in the Rocky Mountains of North America that are nearly 5,000 years old.

"In [Europe](#) there are many trees that are considered to be one thousand years old but nobody has calculated their age," explains Claramunt. The Regional Government of Catalonia has recently changed the name of the 'millennium-old' olive trees to 'monumental trees'.

More information: Arnan X.; López B.C.; Martínez-Vilalta J., Estorach M.; Poyatos R. "The age of monumental olive trees (*Olea europaea*) in northeastern Spain" *Dendrochronologia* 30: 11-14. [DOI: 10.1016/j.dendro.2011.02.002](#) 2012.

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