

Ancient Israel was the source of all domesticated grapes, new study shows

Israel has a thriving wine industry that has its roots in Biblical times but scientists now believe that 11,000 years ago, the Holy Land was the source of all domesticated grapes in the world.

The story began after the last ice age. The earliest archaeological evidence for viticulture dates back to 8,000 years ago in the Caucasus but the source of the vines was unknown. Scientists now believe that the hot climate during the Pleistocene period in the region of Israel led to the domestication and cultivation of wild grapevines. These vines eventually made their way to many areas of Europe where they were bred with wild western varieties.

That is the conclusion of a study published in the journal *Science* earlier this month. Scientists from 17 countries, led by researchers from Ariel University in Israel, sequenced the genomes of 3525 grapevine accessions (2503 domesticated and 1022 wild) from across the Eurasian landmass in order to identify the genetic changes that occurred during the domestication and evolution of grapevines. They used samples from both the domesticated *V. vinifera*, from which most modern grapes were cultivated, and its wild ancestor *V. sylvestris*. By comparing their genetic differences and similarities, they

could trace back the grapevines' evolutionary tree and history of domestication. Their conclusion: all modern varieties likely descended from an ancient *V. sylvestris* ancestor living in much of Eurasia and North Africa throughout the past 400,000 years.

The vine was domesticated simultaneously in Israel and the Caucasus region but the vines from the Caucasus had limited spread and very little further influence as compared to the Israeli vines which came to dominate much of early viticulture. As humans carried the vines to different regions, they cross-bred the domesticated *V. vinifera* grapes with their wild *V. sylvestris* relatives, making them more suitable for producing wine.

The study results were released at the annual meeting of the [American Association for the Advancement of Science](#) on March 2. The investigation revealed that the Israel wild grapevine population (Syl-E1) was the source of the domestication of grapes.

Elyashiv Drori, head of the [Samson Family Grape and Wine Research Center](#) at Ariel University and Eastern Regional R&D Center, said that the research had established the Israeli vines as the original domesticated variety. The study determined that around 8,000 years ago, the grapes that had been domesticated in Israel were cross-bred with grapes from Turkey and then were taken throughout Europe along existing trade routes.

“The Israeli wild grapevines were found to be the source of domestication for all the cultivated group of table grapes, which includes the Israeli domesticated grapevines,” he said. “This initial group of grapevine varieties then were dispersed to eastern and western Europe, to form most of the known wine grapes.”

[Prof Ehud Weiss](#), head of the archaeobotanical lab at Bar-Ilan University,

“The accepted view was that annual crops like wheat, barley and legumes were domesticated some 10,000 years ago, while perennials were domesticated thousands of years later,” Weiss said. “Current

research changes this view and demonstrates these transitions occurred simultaneously, and moreover, with the same species, some 1,600 kilometers apart – a phenomenon we have never seen.”

Grapes were initially grown in Israel for consumption but quickly became adapted for wine making which became a major industry in ancient Israel. Ancient wine presses can still be found around the country. Wine is mentioned in the Bible and played an essential role in the Temple service.

After the Muslim conquest in the seventh century, wine was prohibited and most of the vineyards were uprooted across Israel. During this time, only wines made in Monasteries and Jewish communities for sacramental purposes were allowed. Shortly after this, wine-making was resurrected, only to be toppled again by the Ottoman empire in the 16th century.

Today, there are over 250 boutique and 70 commercial wineries harvesting 13,585 acres of vineyards. 60,000 tons of grapes are harvested each year, producing 65 million bottles of wine every year.

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