Viticulture and Enology in Greece
Jennifer Marlowe
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The story of wine begins almost 8,000 years ago, somewhere in the area between the Black and Caspian Seas, where Vitis vinifera is found growing wild even today. Ancient wine history, commerce, and trade was centered in the countries of the Levant, which includes Eastern Mediterranean Europe, “Asia Minor” and Northern Africa. The peoples of ancient Turkey, Greece, Syria, and Egypt were among the first to realize the economic value of wine. Greece proved to be particularly adept at spreading its dominion throughout the Mediterranean and Black Sea, exporting wine in exchange for grains and precious metals from countries such as Egypt and Spain\(^1\). Today, the most prominent wine-producing countries of the Levant are Greece, Cyprus, parts of Turkey, and Israel\(^2\).

**Historical Background**

Evidence of the existence of wine in Greece dates to approximately 5,000 B.C.E., when it was imported by ship from Mesopotamia and Egypt\(^2\). However, viticulture is not evidenced in Greece before nearly 4,000 years ago\(^3\). Archeological evidence of vineyards are found all over Greece, from Thrace to Crete, and many of the thousands of works of ancient Greek poets, philosophers, and artists reference vine cultivation and wine-making. The Minoans of Crete (2,800 – 1,400 B.C.E.) were the first to develop vine cultivation and wine-making techniques on a higher level. The techniques of viticulture then spread from Crete throughout the Aegean and continental Greece. Eventually, as Greek travelers settled foreign lands, the Greek model of viticulture spread to southern Italy, Sicily, northern Africa, Spain, and France\(^3\). Vines
were brought to the Italian peninsula by the Greeks around 800 B.C.E., and the Romans worked to develop and classify grape varieties, improve yields, and study the problems of soil preference, disease, cultivation, and pruning techniques. Even today, ancient Roman vineyard sites and Greek amphorae can be found throughout the European continent².

The importance of wine in ancient Greek civilization is evidenced by the many myths, legends, music, and writings concerning the vine and wine from this time period²⁴. Homer, Aristotle, Plato, and the whole of classical Greek philosophers, all referenced wine in a positive manner¹. The early inhabitants of the island of Ikaria called the vine ierá, meaning “holy”⁴. The power of the god of wine, Dionysus, was celebrated and feared by the ancient cultivators of the grape vine⁵, though Greek lore initially described Dionysus as a “god of peasants, in contrast to gods of the noblemen”⁴. The origin of wine-making is described in a popular legend. The mythical King Icarius is said to have been taught the secrets of the vine by Dionysus, but only on the condition that they be kept secret. Once the king drank of his first wine, he was unable to control himself and managed to share both the wine and the secrets of viticulture with everyone passing by. His subjects, becoming drunk and angered at the king for putting them in such a state of incoherence, slew their ruler. After regaining their reason, the people decided that wine wasn’t such bad thing in the end, and began making it for themselves⁴!

The relatively slow transfer of viticultural techniques throughout the Greek Aegean allowed ample time for the development of peculiarities in grape-growing and wine-making. Throughout the 2⁰ millenium B.C.E., viticulture and enology of
surrounding Mediterranean regions influenced adjacent Greece grape-growers. Due to the assimilation of native and varying foreign growing techniques, the written record of the ancient Greeks point to a wide variety of local customs in every aspect of viticulture and enology. The diversity of the wines of Greece was unprecedented in the ancient world⁴. Quality in Greek wines experienced a general decline beginning in the late Middle Ages, as the Byzantine empire started to deteriorate. Viticulture in most places was taken over by poor peasants. However, the best of the wine traditions were taken over by monastic communities. Their financial resources and knowledge of the vine allowed for the perpetuation of the best in wine production⁴. With the Ottoman occupation of Greece beginning in the 14th century, monasteries lost much of their financial clout. Additionally, many Moslem converts ripped out their vines to plant grains and raise sheep, as Mohammed proscribed the drinking of wine¹. Though the Ottomans did recognize the financial importance of wine exports, the Levant lost its identity as a wine culture while the Ottoman empire flourished. After the Greek War of Independence (1821-29), the Ottomans uprooted and burned vineyards in many places. It took decades for the wine industry to recover from the nearly five centuries of Ottoman occupation⁴.

Early in the 20th century, Greek wines came into demand due to the phylloxera epidemic spreading throughout the rest of Europe. Phylloxera came late to Greece and spread slowly once there. Macedonia in the north was first affected in 1926, while the Peloponnisos peninsula in the south did not receive phylloxera until 1964. Only a small amount of phylloxera ever reached Crete, though not until 1972. Still, Greece was unable to meet the needs of the demanding market since most of its vineyards were left
in shambles following Moslem occupation\textsuperscript{1}. Before entering the European Community in 1981, the technology of viticulture and enology was primitive. Only recently has Greece entered the world scene as a quality producer of wines\textsuperscript{3}.

**Grape Production and Wine Laws**

Greece is currently the 15\textsuperscript{th} largest producer of wines in the world with approximately 186,000 hectares currently under vine\textsuperscript{1}. Of these 186,000 hectares, a little over 50% are planted with *Vitis vinifera* used in making wine. The other 50% of the acreage currently under vine is used for table grape and raisin production. Wine consumption continues to decrease in Greece and was 25 liters per capita in 1996\textsuperscript{3}.

<table>
<thead>
<tr>
<th>EU Appellation</th>
<th>O.P.A.P.</th>
<th>O.P.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>V.L.Q.P.R.D.</td>
<td>V.M.Q.P.R.D.</td>
</tr>
<tr>
<td>France</td>
<td>A.O.C.</td>
<td>V.D.Q.S.</td>
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<tr>
<td>Italy</td>
<td>D.O.C.</td>
<td>D.O.C.G.</td>
</tr>
<tr>
<td>Spain</td>
<td>D.O.C.</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>Qualitatswein</td>
<td></td>
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</tbody>
</table>

The first wine laws were implemented in Greece by the Ministry of Agriculture in 1971\textsuperscript{3}. However, in order to compete with other EC member nations and to adhere to the established wine laws of the EC, Greece has begun to develop modern wine-making methods and conform to wine laws based upon controlled appellations of origin and quality\textsuperscript{1}. The laws are similar to those developed in other prominent wine-producing countries of the EC and are compared with several of them in Table 1. The O.P.A.P. appellations and other lesser appellations of the Greek wine law system are listed in Table 2. Nineteen wine-producing regions in Greece currently qualify for O.P.A.P. status, which includes Réserve and Grand Réserve wines similar to those of other EC nations. Most Topikos Onios wines are made from indigenous varieties, while the Epitrapezeos Oinos is the favored appellation of wineries wishing to
experiment more in the vineyards and the cellar. Tremendous monetary investments have been made in the Greek wine industry over the past decade, both in cooperatives and in private companies, in order to improve quality of their wines. Currently, approximately 12% of all Greek wines from 26 producing regions qualify for appellation status.

### Table 2: The Greek wine appellations and corresponding descriptions. (adapted from Manessis, 1996)

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-category</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>O.P.A.P.</td>
<td>Reserve</td>
<td>Minimum two years ageing, 6 months cask</td>
</tr>
<tr>
<td></td>
<td>Grand Reserve</td>
<td>Minimum 3-4 years ageing, 1-2 years cask</td>
</tr>
<tr>
<td>O.P.E.</td>
<td>Topikos Onios</td>
<td>Vins de Pays</td>
</tr>
<tr>
<td>Epitrapezeos</td>
<td>Oinos</td>
<td>Table wine, Cava, or Appellation by Tradition</td>
</tr>
</tbody>
</table>

**Retsina**

Perhaps the best known name in Greek wine is that of retsina. The taste for resinated wines may be the only characteristic habit of the Greeks that has its origins in antiquity. Ceramic amphorae that were used in storing wine were often sealed with pine resin, which subsequently leached in the wine to embark a unique flavor. Such resinated wines became so common in Greece that the addition of pine resin during fermentation entered into enological techniques. Legend describes the addition of double to triple doses of pine resin by producers during Ottoman occupation, know that the wines were destined for Turkish armies. As these Moslem soldiers were not supposed to be drinking alcohol, many were reluctant to report the illnesses, even death, induced by the poisoned retsina. Retsina is still common among Greek wines today, produced mainly in Attica from the Savatiano grape.
Important Grape Varieties
There are over 300 indigenous Vitis vinifera species in Greece. Approximately 60% of these are white varieties, while 40% are red varieties. Though current research focuses on the wealth of indigenous Greek varieties, many international varieties of both red and white grapes are beginning to be planted throughout the country, though still in relatively minute quantities.

White varieties
The Assyrtico grape has proven to be one of the finest white varieties produced in Greece. It is grown mainly in the Aegean isles, particularly Santorini. This variety does particularly well on volcanic soils and may live quite a long time, from 70 to 150 years. The Assyrtico grape makes wines of many varied styles, from light and dry to a strong, ages Visanto. The Muscat grape is grown in Patra and on the islands, including Samos, where old vines and low yields produce excellent wines. Muscats can make a wide variety of wines as well, ranging from bone-dry to sweet dessert wines. Roditis grapes are principally grown at higher altitudes. There are both red and green clones of this variety, making a wide range of styles and quality. This variety is at its best in cool, north-facing vineyards, particularly those of Ano Ziro. Quality seems mainly determined by altitudinal differences and micro-climate characteristics. The Savatiano grape covers 15% of Greece’s wine-producing acreage and is the dominant grape of Attica, Veotia, and Evia. It does particularly well hot, arid climates. It is the principle variety of branded table wines and the traditional retsina. Workhorse and international whites being planted in Greece include Chardonnay, Sauvignon Blanc, Semillon, and Ugni Blanc.
Red Varieties

The Aghiorgithiko is one of the top two red varieties of Greece and is unique to the area of Nemea, a quality red wine region of Peloponnesos. Rich in color and without harsh tannins, this variety is best in cool climates and when cask and bottle aged for extended periods. The Xynomavro variety is the second of the top red varieties in Greece, the finest of which are grown in the northern continental climate of Macedonia. Some liken Xynomavro wines of the Naoussa regions to the wines of Burgundy. About one in ten vintages produce excellent wines. Liatiko is a specialty of Crete and is thought to be an ancient variety. It ripens early, often by July, and is often blended with 10% Cabernet Sauvignon. Mavrodaphne is a common and famous varietal produced around Patra and Cephalonia of the Peloponniscs\(^3\). It makes heavy and port-like dessert wines of more than 15% alcohol\(^1\), and is often blended with Cabernet. Workhorse and international red varieties grown in Greece include Cabernet Sauvignon, Cabernet Franc, Grenache, Merlot, and Sangiovese\(^3\).

Prominent Wine Producing Regions

Peloponnisos

Peloponnisos is the home of Sparta, and is by far Greece’s largest wine-producing region with 165,000 acres under vine. This southernmost region of the Greek mainland produces 34 million gallons of wine per year, approximately 25% of the nation’s total production\(^1\). Wines of Peloponnisos are probably the most diverse of any region within mainland Greece\(^4\). Important varieties include Phileri, Aghiorgithiko, Muscat, and Mavrodaphne\(^1\). Production is concentrated in the northern half of the region, mostly around the perimeter, from five to twenty miles inland, on higher and
steeply sloping terrain\textsuperscript{4}. Vineyards of the Nemea produce wines that have been called so for over 500 years. The region is generally divided into 3 production zones, including semi-mountainous, the lower slopes and plains, and the mountain plain of Asprokambos. As is typical, wines of the semi-mountainous zone are considered to be of highest quality. The central areas of Morea and Arcadia are known for their generously pine-laced retsina, though are also home the of one of the most delicate of Greek vintages, Mantinia. The wines of Patras, particularly the Mavrodaphne variety, are among the most widely known of the Peloponnesian wines as well as one of the best known of the whole of Greece. The Mavrodaphne of Patras is frequently served by Greeks as an aperitif\textsuperscript{4}.

\textit{Attica}

The region of Attica at the southern end of Greece’s mainland is bordered by the ancient cities of Athens and Thebes. The region is second in production to Peloponnisos, producing 15\% of Greece’s total wine output. Though the fairly warm climate of Attica results in production of many undistinguished table wines, the countries best retsina wines are produced in this region from the Savatiano grape. Rosé retsina wines are also made in this area from the Roditis variety. Red wines include those produced from the Mandilaria varietal\textsuperscript{1}. Many of Attica’s producers have in recent years begun producing unresinated white wines of the Savatiano grape grown at higher elevations\textsuperscript{4}.

\textit{Macedonia}

Macedonia is the northernmost wine-producing region of Greece. This region is best known for its red wines, especially in the area of Naoussa where the Xynomavro variety is common\textsuperscript{1}. The region of Goumenissa, a small appellation north-east of
Naoussa, is known for its production of softer Xynomavro wines along with several other reds\(^4\). Other Macedonian appellations include those of Amyntaion, Siatista, and Chalkidiki, an appellation currently of increasing promise\(^1\). Thrace, a region of Macedonia now sparse in wine-production, is the probable originator of the cult of Dionysus\(^4\).

**Samos**

Samos is an island of the Aegean closer to Turkey than to Greece, though by far the most widely known place-name in Greek wine through the past several centuries. Ironically, Samian wines in antiquity ranked far below most other Greek wines in terms of quality. Improvements resulted from the acquisition of more suitable varietals\(^4\). The island is best known for its muscat wines of widely varying styles. Samos is the sole Greek appellation which allows no blending of wines either between island varieties or with wines from other areas of Greece\(^1\). Two types of un-aged sweet muscat wines are made from fresh grapes harvested at peak maturation\(^4\). Aside from Muscat, the Mavrodaphne grape is also produced on the island due to its mild climate\(^1\).

**Santorini**

The island of Santorini lies north of Crete and is a treeless landscape largely covered by vineyards\(^3\). It is known for its volcanic soil and sparse rainfall\(^1\), and may be host to the most remarkable vineyards of Greece\(^4\). A wide variety of grapes are cultivated on the island, the most important varieties being the white Assyrtico, Athiri, and Aidani, and the red Mandelari. Assyrtico is arguably the finest of the Greek noble varieties. Many hypothesize this island to be the lost city of Atlantis, as it was destroyed by a volcanic eruption around the year 1,500 B.C.E.\(^4\)
Crete
This is the largest island of the Mediterranean, situated far to the south of the Greek mainland. It is the third largest Greek appellation, with more than 112,500 acres under vine, and is ideally suited for the vine given its latitudinal position. Only the Aegean winds produce an environmental threat to the grapes of Crete. The island is hot and hilly, lending to high yields and big, highly alcoholic wines. Crete is home to a selection of vines all its own, with a tradition more ancient than any other region. Cooperatives are rapidly expanding lands under vine, particularly in the appellation of origin zones where phylloxera has yet to be seen. The Greek government is as well striving to improve wine quality in Crete by designating sub-appellations such as Sitia, Dafnès, Peza, and Archanes.

The Vintners
Achaia-Clauss was founded in 1861 by a Bavarian raisin merchant. The winery of Achaia-Clauss is credited with making the first port-like Mavrodaphne and is today one of the best-known producers of classic Greek wines. The winery has its headquarters in the region of Peloponnisis along the river Glafkos, a unique estate in Greece surrounded by 100-year old cypress trees, a towered gate, and a magnificent cellar and old cooperage. The table wine of Achaia-Clauss, “Demestica,” has become known world-wide.

Boutari J. and Sons Wineries was founded in 1879 in Naoussa. Today, the company has estates and wineries throughout the grape-growing regions of Greece. The Boutari wineries are experimenting widely with nearly extinct indigenous cultivares and cosmopolitan varieties throughout their domain. They currently produce an equally...
varied stock of wines, from Chardonnay and Merlot to Xynomavro and Aghiorghitiko wines.

The Cambas winery is an equally well-known producer of the classic Greek wines. Cambas is also headquartered in the Peloponnisos. The vineyards are predominantly sand and clay, and so are planted with very old Savatiano grapes. The company was taken over by Boutari in 1991, and much has since been done to restore it to its former prominence. Cambas is mainly known for its fine production of wines from native varietals.
References


