



Texas Wine Marketing Research Institute

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A HISTORY OF THE AMERICAN WINE INDUSTRY



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Technical Report No. 07-02
June, 2007

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INTRODUCTION

Wine and silk, these two luxurious commodities were constantly linked in the English imagination as the most desirable products that America could yield (Pinney, 1989). This partnership of vine and silk formed, from the beginning, one of the major themes in the colonial hopes for half a century under Elizabeth and James the First (Abbot, 1975). Indeed it lasted far longer than that, for one regularly finds silk producing and winegrowing linked together by hopeful speculators well into the nineteenth century.

This paper will summarize the history of grape growing and winemaking in the United States from early myths to post prohibition. The American wine industry has, during the 75 years since prohibition, become the 4th largest producer of wine in the world behind the old world giants of France and Italy. With winegrowing in the United States succeeding so brilliantly after long years of failure, frustration, and near ruin from prohibition it seems appropriate that the many obscure and forgotten people behind that success should be brought forth.

The struggle to make the New World yield wine known in Europe began by the earliest settlers and persisted for generations, only to end in failure over and over again. Few things can have been more eagerly tried and more thoroughly frustrating in American history than the enterprise of growing European varieties of grapes for the making of wine. Not until it was recognized that only the root stock of Native American grape varieties would succeed against the endemic diseases and harsh climate of North America did winemaking have a chance in the eastern part of the country. That recognition came slowly and reluctantly.

By the mid-nineteenth century, the colonization and development of California transformed the situation. In California the European grape flourished, and the state quickly became a

bountiful source of wines resembling the familiar European styles. At the same time, the development of new hybrid grapes, between native and European varieties, and an accumulating experience in winemaking produced a variety of wines in the diverse conditions of the country outside of California. By the beginning of the twentieth century the growing of grapes and the making of wine across the United States was an important economic activity. The hopes of the first settlers, after nearly three centuries of trial, defeat, and renewed effort, were at last realized. Unfortunately the temperance movement and Prohibition put an end to this success story. Not until many years after the repeal of prohibition, had the wine industry in America regained and perhaps exceeded its previous successes, this time in the eyes of the world wine community.

THE MYTH OF VINLAND

Myths exist in other areas of our lives and for various reasons, we hold onto these “false truths” long after we should. Some may call it faith; others simply chalk it up to tradition: once an object gets an image, it’s hard to shake it. The history of the vine in America begins, symbolically veiled in the medieval Norsemen's explorations with the story of Leifr Ericsson. The story is told that in A.D. 1000, he sailed from Greenland to an unknown country to the west. However, historians disagree as to what the records of this voyage actually reveal, since they are narrative accounts in a strange language, and are uncritical, indistinct, and contradictory (Pinney, 1989; Quinn, 1977). The main source of information about the Viking voyages to Vinland can be derived from two Icelandic tales, *The Saga of Eric the Red* and the *Saga of the Greenlanders*. These sagas were written down approximately 250 years after the settlement of Greenland and are open to considerable interpretation. The most popular and well researched is the tale, about Leifr Eiríksson, who in 1000 A.D. left Greenland in search of wood. With wood being in very short supply in Greenland, the settlers there were eager to explore new land. Leifr Eiríksson

explored the coast that he called Vinland, and established a short-lived colony. As this story goes, during one inland exploration, Leifr and his men went in one direction, while another member of the exploration party, a German named Tyrker, went another direction making the discovery of what he called wine berries, or *vinber* in the original Old Norse, which translated into English as "grapes" (Quinn, 1977). The Norsemen included these *vinber* as part of their cargo and Leifr, in honor of this notable part of the country's produce, called the land "Wineland" (Pinney, 1989; Quinn, 1977).

As a German, Tyrker claimed to know what he was talking about. But research has indicated that the vines of Leifr Ericsson's "Wineland", or what is thought to be Newfoundland, were in fact not grapes at all but the plants of the wild cranberry (Fernald, 1910).

Other tales derives from Adam of Bremen's placed "Vinland" further south referring to long-i *Vinland*, which mentions huge amounts of grapes growing there. Bremen received his information from King Svend Estridson. However, grapes normally do not grow in the sites commonly considered as possible locations of Vinland because they are located to far north (Pinney, 1989; Quinn, 1977).

Since these tales were written much later, in many cases 250 years after the actual voyage, an explanation for this could be they were influenced by accounts of others. For example:

- Stories by King Svend Estridson referred to similarly sounding Wendland, usually associated with the Germanic tribe "Vandals" in an earlier account where grapes did grow, and this was later confused with Vinland by Adam of Bremen.

- Tales by the individual crew members that explored during longer voyages further south reported finding Concord style grapes, confusing the stories told about the Vinland settlement. Concord grapes were native to what is now Massachusetts.
- Another possibility is the reference to any of the abundant berries in Newfoundland, including gooseberries or blueberries, which were suitable for winemaking.
- Finally it has been speculated that grapes did in fact grow in Newfoundland (47-51°N) in the past when a successful vineyard was established in Gambo, Newfoundland and Labrador, 48 50°N. The time period of the Vinland settlement corresponds with the Medieval Warm Period from about the 10th century to about the 14th century (Quinn, 1977). Water temperatures in the northern hemisphere during this time were 1°C warmer, allowing the planting of vineyards as far north as the coastal zones of the Baltic Sea and southern England (Quinn, 1977).

However, no wild grapes grow in so high latitude today. Though it is tempting to believe that the Vikings really did discover grapes in their "Wineland" or Vinland, the evidence is against this claim. Their name of "Wineland," however, was an excellent prophecy. For the continent they discovered was in fact a great natural vineyard as evidenced by the vast variety of grapes that grew farther to the south along the Atlantic coast (Pinney, 1989).

NATIVE AMERICAN GRAPES

Grapes grow abundantly in many parts of the world: besides the grapes of the classic sites in the Near East and in Europe, there are Chinese grapes, Sudanese grapes, and Caribbean grapes (Pinney, 1989). But, though the grape vine is widely tolerant and readily adaptable, it will not grow everywhere, and in some places where it grows vigorously, it still does not grow well for the purpose of winemaking. The main restrictions are the need for sufficient sun light for clusters to develop the fruit to full ripeness, yet sufficient winter chill for the vine to go dormant. There is another consideration. The so-called "balance" of a wine requires that the sugar content of the grape—essentially the product of heat—not overwhelm the acid content. Too much heat leads to too much sugar and reduction of flavor. Too little and too much acid is present. Either extreme destroys the wine's balance elements.

The continental United States lies within the temperate zone of the Northern Hemisphere, with the potential for vineyard development, although not all necessarily good. In fact, more species of native vines are found in North America than anywhere else in the world. The number of *native* species varies according to the system of classification followed, but it is on the order of thirty, or about half of the number found throughout the entire world (Pinney, 1989).

Here the operative word is *native*. The vine of European winemaking is the species *vinifera*—"the wine bearer," in Linnaeus's Latin—of the genus *Vitis*, the vine. *Vitis vinifera* is the vine whose history is identical with the history of wine itself: the leaves of *vinifera* bind the brows of Dionysus in his triumph; the seeds of *vinifera* are found with the mummies of the pharaohs in the pyramids. It was the juice of *vinifera*, alive through the powers of fermentation that led the ancients to connect wine with the spiritual realm and to make it an intimate part of religious ceremony. In the thousands of years during which *vinifera* has been under cultivation, it

has produced thousands of varieties—4,000 by one count, 5,000 by another, 8,000 by yet another, though there is no realistic way to arrive at a figure (Pinney, 1989).

The grapes of *vinifera* generally have thin skins, tender, sweet flesh, delicate flavors, and high sugar, suitable for the production of well-balanced wine. The wines that are pressed from them cover the whole array of notable types such as the "noble" Cabernet Sauvignon of Bordeaux, the Pinot Noir of Burgundy, Riesling of the Rhine and the Chardonnay of Champagne and Burgundy. *Vinifera* vines have been identified and internationally recognized as best for the production of superior wines in the regions to which they are adapted (Fernald, 1910; Pinney, 1989).

However, no such grape is *native* to North America. The native grapes are tough, wild, usually small and sour, and known for the vigor of their vines than for the quality of the wine made from their fruit. They grew and adapted to their circumstances largely ignored by man, and while the development of *Vitis vinifera* was guided to satisfy the thirst of ancient civilizations, these North American vines had only to survive (Fernald, 1910).

Pilgrims in New England noted the species now called *Vitis labrusca* growing in vast numbers in the woods around their settlements (Pinney, 1989). The *labrusca*, or northern fox grape, has large berries that grow black, white, or red and is the only native grape that exhibits this range of colors. *Labrusca* is the best known of the native species because of the ever-present Concord, the grape most Americans today consider the standard of "grapeyness" in juice and jellies. *Labrusca*, or the "fox grape" yields an unflattering and distinctive flavor unique to eastern America, with characteristics known as *foxy* (Fernald, 1910).

Hundreds of miles to the south of the Pilgrim settlements, and even before the Pilgrims landed, the Virginia Company at Jamestown encountered a number of native grape species,

among them the *Vitis rotundifolia*, or round leaf grape, that grows on bottom lands, on river banks, and in swamps. The rotundifolia grape, commonly called muscadine, differs sharply from other grapes and it is often distinguished as a class separate from "true grapes" (Quinn, 1977; Pinney, 1989). The vine is low and spreading, with large, tough-skinned, round fruit that grows in loose clusters containing only a few berries. The fruit is sweet, but like most native grapes, its juice usually needs to have sugar added to it in order to produce a sound wine. The fruit has a strong, musky odor that carries over into its wine (Amerine & Cruess, 1960).

The *Vitis riparia*, or riverbank grape was well known to both Pilgrims in the north and Virginians in the south. A small-berried and harsh-tasting grape this variety is the most widely distributed of all Native American grapes. Riparia ranges from Canada to the Gulf of Mexico, and west, with diminishing frequency, to the Great Salt Lake choosing river banks or islands to flourish. As its range suggests, it has a tough and hardy character that allowing it to survive under a great variety of conditions. As a testament to its hardiness, it is currently being used as a basis for hybridizing wine grapes for the cold climates of Minnesota and Wisconsin (Wines and Fines, 1978).

Another grape widespread throughout the eastern United States is *Vitis aestivalis*, and of all the North American natives, this summer grape is best for making wine (Fernald, 1910). Unlike the rotundifolia and others, it has adequate sugar in its large clusters of small berries; and it is free of the "foxy" odor of the labrusca.

As settlers moved beyond the eastern seaboard and made their way west, a new range of species and varieties was encountered, though none of such importance as those just mentioned above. The best known is *Vitis rupestris*, the sand grape, which favors gravelly banks and dry water courses and grows through the region around southern Missouri, Illinois and into Texas,

because it is not a tree climber, it has been very vulnerable to grazing stock and is nearly extinct (Fernald, 1910).

There are many other species of native grapes that could be mentioned, however none are significant in the development of hybrid vines (Munson, 1909). The earliest reference on record to native grapes and the combination with *Vitis vinifera* through breeding began in the nineteenth century.

The native varieties are true grapes, no doubt sharing with *vinifera* the same ancestor far back along the evolutionary scale. That is one of the most striking facts about the numerous wild American grapes—how remarkably well adapted they are to the regions in which they grow, and how various are the forms they take (Fernald, 1910; Pinney, 1989; Quinn, 1977). There are dwarf, shrubby species growing in dry sand or on rocky hills; there are long-lived species growing to enormous size, with stems more than a foot in diameter and climbing over one hundred feet high on the forest trees that support them; some flourish in warm humidity, others on dry and chill northern slopes; some grow in forests, some along river banks, some on coastal plains. With so many varieties of native grape distributed over a wide area it is hard to say where the grape is most at home in America (Hedrick, 1908). Yet the fruit produced is often lacking in sugar, or high in acid and sometimes full of strange flavors, such that wine pressed from these grapes is thin, unstable, sharp, and unpleasing. Wine from the unadulterated native grape is not wine at all by the standards of *Vitis vinifera*.

THE FIRST SETTLERS

Explorers and early settlers along the coast of eastern North America recorded the abundance of the wild grape vines. Within two years of Columbus's discovery the Spaniards reported vines growing on Caribbean islands (Morison, 1963). Hernando Cortez, as Governor of

Mexico in 1525, ordered the planting of grapes. The success was such that the King of Spain forbid new plantings or vineyard replacements in Mexico after 1595, fearing his colony would become self-sufficient in wine. This edict was enforced for 150 years, effectively preventing a commercial wine industry from forming (Pinney, 1989).

The available information on early settlers and wine production prior to 1607 is sparse. However the following accounts should shed some light on what these explorers encountered.

In 1524, in what is now the United States and only a generation after Columbus, an Italian explorer Giovanni da Verrazzano, sailing the north Atlantic seacoast, encounter a region he called Arcadia, which turned out to be Kitty Hawk, off the North Carolina mainland. What he found in this region was an abundance of vines growing naturally, reminding him of his native Lombardy (Hakluyt, 1903). A decade later, and farther north, Jacques Cartier described an island in the St. Lawrence, later named Bacchus (Hakluyt, 1903). Given each mans European perspective on wine; it was natural for them to suggest that the grapes they saw might yield wine. However, neither had experimented with the native grapes nor did the fact the native Indians never spoke of wine; or had any fermented drinks (Russell, 1980).

Although Pinney (1989) recently disputed this story, the first reference to the actual making of wine in what is now Florida was by Captain John Hawkins in 1565. As the story goes, in 1564 the French Protestant Admiral Gaspard de Coligny sent out a colony of Huguenots (French Calvinists reformers) to the mouth of the St. John's River in Florida. One year later, Hawkins found the wretched survivors on the verge of starvation. Hawkins sold them a ship and left them food noting that although they failed to grow food for themselves, the Frenchmen were able to make 20 hogsheads (63 US Gallons) of wine most likely made from the muscadine grape (Hakluyt, 1903).

After the French were driven from the Florida coast, the Spaniards made a settlement on nearby Parris Island, South Carolina—and a vineyard was planted in 1568, believed with vinifera vines, with no record of successful wine production (Pinney, 1989). But because the Spanish colonists were surrounded by abundant wild grapes it is believed they experimented in wine production. In any case, Parris Island may claim to be the place where the first attempt at winegrowing in America was made (Hakluyt, 1903; Pinney, 1989; Quinn, 1977).

In 1584 the first expedition of Sir Walter Raleigh's ill-fated colonial enterprise landed on the low coast of North Carolina (then called Virginia). What the English found was an abundance of grapes, growing so close to the water's edge. The likelihood is that the grapes in question were muscadines, though they would not have been ripe in July, when the expedition landed (Andrews, 1964; Morris, 1933; Pinney, 1989).

Raleigh's unfortunate Roanoke colony, the one founded by the third expedition in 1587, vanished without trace, so if the colonists attempted winemaking, it is not known. However, an immense Scuppernong vine (a large type of muscadine) is still on Roanoke Island, believed to be one of the vines that the Roanoke settlers planted. But it is not unreasonable to think that these early settlers tried to make wine beginning the long chapter of hopes and failures of the English colonies through the Revolution (Pinney, 1989; Quinn, 1977).

VIRGINIA AND THE OTHER COLONIES

Documented information on the next determined effort at English colonization in the American south is much richer. The settlers of Jamestown, Virginia, in 1607, the first permanent colony, were struck by the richness of grapes that flourished in the woods. This gift of nature helped to inspire a vision that persisted for many years in the English imagination; a vision of

fabulous wealth in the New World supported by the example of Spanish successes in Mexico and South America (Pinney, 1989).

This vision was supported, by an orthodox economic argument. In order to obtain such products as silk, wine, and olive oil, England had to pay cash to Spain and France, her rivals and enemies. One of the main motivating factors of early English colonization was to provide through her own efforts England with silk, wine, oil, and other such commodities, thereby defy the French and Spanish, a heady prospect that powerfully influenced the English vision of American colonization (Percy, 1969). The two luxurious commodities, wine and silk, were constantly linked in the English imagination as the most desirable products (other than gold) that America could yield and upon landing in 1607 at the James River the settlers saw a great variety and great abundance of vines. This sparked the beginning of the American wine industry (Pinney, 1989; Quinn, 1977)

Captain John Smith stated that the colonists of the first Virginia Voyage made "near 20 gallons of wine" from "hedge grapes." More circumstantial, but still doubtful is the statement by William Strachey, who spent a year (1611) in Jamestown. He had consumed this rath [young] wine, produced by Doctor Bohoune and others, and stated it was as good as any French wine. The wine, 20 gallons at a time, was made simply by hand crushing the grapes letting it settle 5 or 6 days, thereby creating a strong and heady wine (Andrews, 1964; Percy, 1969; Pinney, 1989). Dr. Laurence Bohune has the distinction of being the first known winemaker in America. He came out to Jamestown in 1610, later became physician general to the colony, and was killed in a sea battle with the Spanish on a voyage from England back to Virginia.

Word about the quality of Virginia wine had already reached England by 1610. When Lord De La Warr was appointed governor of the colony in 1610, he sent instructions that a

hogshead of native wine be sent to England. On his return to England in 1611, De La Warr was able to state in his official report that many vines were planted and prospered well. One of those vineyards was planted by Ralph Hamor who was in the colony from 1610 to 1614 (Lukacs, 2000; Pinney, 1989; Quinn, 1977). Despite all their attempts skilled vineyard managers, or vinearones (wine growers) were needed (Percy, 1969). The governor's plea for skilled wine growers took 8 years before any would arrive in the colony. By that time tobacco had rapidly established itself as the sole economic dependence of the colony.

To combat the dominance of tobacco, and fill the vision creating an American wine, a law was enacted in 1619 requiring every landholder to plant and maintain ten vines each year until they were experienced in the vineyard.

There were eight *vignerons* sent to Virginia in 1619 mostly Frenchmen from Languedoc (Andrews, 1964; Pinney, 1989). The results of the first new planting were reported as successful. In 1620 the company, encouraged by these reports, announced that it was looking for more wine managers and vines from France and Germany (Percy, 1969; Pinney, 1989). In 1621, at least 10,000 vines were planted, although it is not certain if they were native or vinifera. In the next year the settlers sent to every landholder in Virginia a manual on the cultivation of the vine written by a Frenchman named John Bonoel, with instructions on how to plant and care for vines and the production of wine. This is not the first American manual on viticulture, since it was written by a Frenchman in England; but it may claim to be the first manual *for* American winemakers (Andrews, 1964; Percy, 1969; Pinney, 1989).

This combination of optimistic ignorance and unforeseen new difficulties was fatal to the effort at wine-growing by the English settlers. The notion that winegrowing is a craft requiring considerable time and experiment is no doubt true, but their efforts failed because the European

vine could not successfully grow in the Eastern America soil or climate. From the point of view of the tender *Vitis vinifera*, the New World was no Garden of Eden, but full of dangers and pestilences.

First, there were the American extremes of climate, which were so different from the winegrowing regions of Europe. The summer humidity steamed them and provided a medium for fungus infections like powdery mildew, downy mildew, and black rot; diseases unknown in Europe until the latter half of the nineteenth century. Among the many destructive insect pests were the grape-leaf hopper and the grape berry moth (Pinney, 1989). Thus the very fact that America had native vines, which excited the early settlers with the promise of winemaking, was the cause of the European vine's failure there (Pinney, 1989).

Even if a vine somehow escaped its trial by fungus, it had another disease to endure. No *vinifera* among those planted in the East during colonial times ever reached this stage, and therefore the disease in question was not described until late in the nineteenth century, and then in California, where it is not native: Pierce's Disease, a bacterial infection that is fatal to the vine. However, the imported vines survived the onslaughts of mildew, rot, flying insects, bacterial infection, and extremes of weather, there was a more deadly disease waiting to infest the vineyards with disastrous results. This was the *Phylloxera vastatrix*, a microscopic aphid, or plant louse, native to America east of the Rocky Mountains.

Given the difficulties of climate and disease, most vineyards were just abandoned; replanted to tobacco instead. However, the idea of grafting the European vine onto American roots, the practice that was to save the vineyards of Europe and California from annihilation in the nineteenth century, never occurred to many early American growers. But in the conditions of eastern America, such combinations, though they might have been effective against the

unrecognized Phylloxera, were futile without the support of modern fungicides. Mildew and black rot would have destroyed leaves and fruit as usual. And the hot, humid summers and the sub-zero winters would not have been any kinder.

Because this was a new land and because it was long before the time of scientific plant pathology, the causes of grape failure were not discovered until much later. The early colonists naturally chose an easy explanation for their difficulties—bad soil, bad stock, bad methods, and laziness (Pinney, 1989).

The experience of the English in Virginia was a model, repeated more or less fully and persistently, in all the other colonies of seventeenth-century America. Following the Eastern coastline of America from north to south, each separate region presents a brief chronicle of experiment and failure in wine making. For example:

- Maine, in 1620, a speculator named Ambrose Gibbons proposed a plantation at the mouth of the Piscataqua River in this bitter northern climate to cultivate the native grape vine with disastrous results.
- Massachusetts, there was a pleasant fiction that wine from native grapes figured in the first Thanksgiving, in November 1621 (Abbot, 1975; Quinn, 1977). The Pilgrims saw vines everywhere at Plymouth Bay but there has been no reference to wine at that meal (Abbot, 1975).
- In the Massachusetts Bay Colony, wine was made from native grapes in the first summer of settlement in 1630 (Abbot, 1975). The result was one of the reasons the colonists petitioned the Massachusetts Bay Company in London to have Frenchmen experienced in planting of vines.

- The example of winegrowing was set at the top of the hierarchy in Boston. Governor John Winthrop, in 1632, secured the grant of Conant's Island in Boston Harbor, on condition that he plant a vineyard. Three years later his rent for the place, then called Governor's Garden, was set at a hogshead of wine. In 1640 this was changed to two bushels of apples—evidence that winegrowing had not succeeded (Pinney, 1989).
Despite these results, Dr. Robert Child, preparing in 1641 to emigrate from England to Massachusetts, proposed to establish a vineyard in the colony. He visited France during the vintage season to learn how the French made wine, proposing that the hills of New England would be lined with terraced vineyards, becoming the Beaune or the Chablis of the New World. Child at last arrived in Massachusetts in 1645, having sent several varieties of vines before him and intending to establish his vineyard in the Nashua Valley. Despite his confidence that in three years wine may be made as good as any in France, nothing came of his intentions (Pinney, 1989).
- In New Netherland of the Dutch settlers, a vineyard was planted as early as 1642, but was destroyed by the severe winter temperatures. Immediately after the English took over the colony from the Dutch in 1669, the new governor granted a monopoly of grape growing on Long Island to Paul Richards, who also received the privilege of selling his wine tax-free (Abbot, 1975; Pinney, 1989). Whether he ever had any wine to sell the records are not clear, but silence is significant. A Dutch traveler visiting Coney Island in 1679 found an abundant of grapes growing wild noting that the settlers had planted vineyards without success.
- The Swedes along the Delaware in what is now New Jersey and Delaware were just as eager as the English and the Dutch to turn their place in the New World into a successful

wine business. Viticulture was one of the official instructions given to the Swedish governor, Colonel John Printz, in 1642.. However, the Jersey farmers turned to apple growing instead and began to produce the cider for which they were famous throughout the colonial period (Pinney, 1989).

- Across the river in Pennsylvania, William Penn hoped to make viticulture flourish in the American woods. In 1683 Penn recorded that he consumed a good claret made of native grapes by a French Huguenot refugee, Captain Gabriel Rappel (Quinn, 1977; Pinney, 1989). Rather than continuing to work with native grapes, Penn concentrated on vinifera planting vines from Bordeaux.
- Lord Baltimore, the proprietor of Maryland, in 1662 instructed his son the governor to plant grape vines on a 240 acre parcel of land. In 1665, another hundred acres were added (Abbot, 1975; Pinney, 1989). Wine made from these vineyards were reported to have been as good as the best Burgundy (Abbot, 1975).
- In what became South Carolina, the first settlement was directed by the Lords Proprietors of the Carolinas from their headquarters in London. The leader of the expedition was instructed to take vines from Europe when he sailed in 1669 from England (Pinney, 1989). The colonists established themselves around what is now Charleston and in their first summer reported success in planting. However, years later the vines failed and tobacco was planted.
- Finally Georgia, last of the original thirteen colonies, was to be a commercial experiment. Georgia's formal wine production began when founder, James Edward Oglethorpe tried to introduce European viticulture as a part of his economic plan. He wanted to see the new Georgia Colony excel in two products, fine silk and fine wine. Georgia had been

considered a prosperous region for mulberry trees (silk production). Unfortunately, Oglethorpe's silkworms disliked the native variety and Georgia's climate. Likewise, European wine grapes (*vitis vinifera*) were unable to be successfully cultivated due to mysterious New World diseases and indigenous insects. European grapes and mulberry trees were abandoned for rice and indigo. Eventually the cotton plant replaced those commodities.

Overall the colonists could not make the European vine grow, nor was it worth their while to develop the native vine (Pinney, 1989). So for a short period of time, the great expectation of wine and silk was denied their benefactors in England. Tobacco and cotton became the cash crops of the colonies.

WINE MAKING AS AN INDUSTRY

At the beginning of the eighteenth century, the prospect of winegrowing in America was hardly any clearer than it had been a century earlier. The Virginians had tried, through the proceeding century, to lay the foundation of an industry. The secret eluded them as it did the colonists of the Carolinas, who also made an officially sponsored effort, less prolonged and less intense than in Virginia. Along with these publicly encouraged trials, hundreds of local, individual, and amateur experiments in vine growing and in winemaking had been attempted from the beginning to the end of the century up and down the entire length of the Atlantic coast (Abbot, 1975; Andrews, 1960; Lukacs, 2000; Pinney, 1989).

The scale of all this was too small to be visible even on the narrow strip of early colonial America. The work, frustrated after a few years wherever it began, established no tradition; nor was there any possible coordination of effort and experience among the small, isolated, and widely separated colonial communities. Yet after a century of trial and error, from 1600 to 1700,

and no visible successes, the fledging American wine industry knew less about the reasons for failure than when they started (Abbot, 1975; Andrews, 1960; Pinney, 1989).

Nevertheless, the prevailing ignorance meant that hope remained alive. For who could say that the next optimist might not succeed? European grapes had not grown well; but since no one knew any reason why, no one could say that the wine grape could not flourish in the Americas. Whatever the truth may finally appear to be as to *Vitis vinifera* in the eastern United States, the colonist at the beginning of the 1700s knew simply that the wild vine, as it always had, still flourished powerfully, that it must therefore be possible to grow some sort of grape for making wine, and that the enterprise was worth continuing.

In no colony in the years before the Revolution did the actual enterprise of systematically growing and harvesting grapes, and then crushing them for wine, extend to more than a very few individuals, despite subsidies, premiums, special prerogatives, exhortations, legislation, and penalties. Doubtless thousands of small farmers and town-dwellers ventured to try how a few gallons of native grape juice might turn out after fermenting (Pinney, 1989). But it is possible to identify a considerable number of proprietors who grew grapes and made wine, with varied success, either on their own initiative, or with public encouragement, or both. Hardly anyone in those days undertook the experiment without a surge of patriotic enthusiasm and a hope that the glory of bringing sound, cheap, American wine to his countrymen might be his (Abbot, 1975; Pinney, 1989).

After independence much of the winegrowing in this new country resembled what had been done before the Revolution: companies for developing vineyards were founded, as they had been earlier in Virginia; communities of foreign viticulturists were subsidized, as they had been before in the Carolinas and elsewhere; religious communities tried to make winegrowing a part

of their economy, as they had tried before in Pennsylvania and New England. In general, the typical American winegrower was likely to be a German or a Frenchman, as he had been before the Revolution. Yet the long-sought success was at last a native affair, brought about by a Pennsylvanian growing a North Carolinian grape with symbolic fitness in the nation's new capital, Washington, D.C.

The first notable post revolutionary attempt to establish a successful viticulture was carried out near Philadelphia, where Penn had planted his vines a hundred years before. In 1786 a Frenchman of an adventurous, but rather dubious, past named Peter Legaux bought an estate of 206 acres at Spring Mill (Andrew 1964; Pinney, 1989). There he began planting European vines from Medoc and Burgundy on the slopes of his property and building vaults for wine storage. After he had had some experience with growing vines and had learned how hard it is to keep an experiment going without financial backing, Legaux decided to obtain public support. To do this he legally secured an act of the Pennsylvania legislature forming a company for the purpose of promoting the cultivation of vines called the Pennsylvania Vine Company (Abbot, 1975). The enabling legislation was passed in 1792, when commissioners were appointed to receive subscriptions for the company's stock of 1,000 shares at \$20 each. Despite this respectable enterprise, money came in slowly. Only 139 shares were sold the first year, and Legaux soon found himself in difficulties. He wrote to General Washington offering to sell his house as a country residence for the president during congressional sessions on condition that he be allowed to continue his improvements in the cultivation of the vine (Abbot, 1975; Pinney, 1989).

In August 1793, a public notice tells us something about Legaux's promotional talents—"the first vintage ever held in America" was a bold claim to be making three hundred years after Columbus. Records indicate that the vintage yielded six barrels of wine, or 378 gallons (Pinney,

1989). Finally, early in 1800 the Pennsylvania legislature passed an act to stimulate the lagging sale of Vine Company stock by making the terms of purchase easier. Despite all Legaux claims that the wine was from the *Vinifera* vines it appears from records that in fact the native hybrid best known as the Alexander was used. Legaux never gave up his insistence that the grapes were in fact European, and as a result he sold large quantities of his wine at premium prices under an attractive foreign name (Phillips, 1977; Pinney, 1989).

THOMAS JEFFERSON, THE PATRON SAINT OF AMERICAN WINE MAKING

The first decade of the nineteenth century was the period of Thomas Jefferson's administration; it is especially fitting that the early successes in American winegrowing should have occurred then, for Jefferson was, both in private and public, the great patron and promoter of American wine for Americans: in private, as both an experimental viticulturist and a notable connoisseur; in public, as the spokesman for the national importance of establishing wine as the drink of temperate men and as the sponsor of enterprise in American agriculture generally, and as secretary of state he selected the wines for President Washington's table (Lukacs, 2000; Morris, 1933; Pinney, 1989). Agriculture was in his words "the employment of our first parents in Eden, the happiest we can follow, and the most important to our country" (Pinney, 1989, pp 126). America, he firmly believed, had the potential to yield wine both cheap and good: all that was needed were skilful laborers. However, no domestic wines made in his lifetime were anywhere near as good as the fine European ones he imported to Washington and Monticello; and little changed for more than 150 years. Except for a short period in California in the 1880s and 1890s, American wines remained in the shadows of the great wine of the world. No account

of the history of wine in America is complete without at least a bare summary of "Jefferson and wine" (Lukacs, 2000).

His extended residence in France as American minister from 1784 to 1789 greatly increased his knowledge of wine, particularly from his connection with French wine Merchants.. He also had a collection of the finest French wines made for him by an expert and frequently made tours to the wine regions of France and Germany, where he questioned the experts and made copious notes, descriptions, and memoranda on the technicalities of viticulture and winemaking.

One of the first things Jefferson did on his retirement from public life was to make a fresh attempt at vine growing. But failure ended Jefferson's hopes for some years, during which no further attempts on winemaking were made. But late in 1815, Jefferson was approached by a young Frenchman named Jean David, newly arrived with a scheme for viticulture in northern Virginia. Unfortunately, after stirring up Jefferson's old passion for wine, David backed out due to his allegiance to the French wine industry.

Yet Jefferson never ceased to believe that winemaking could be accomplished, even if by others. On the founding of the Agricultural Society of Albemarle County in 1817, Jefferson drew up a list of its objectives which singled out the whole family of grapes for the society's attention and enquiry (Pinney, 1989). He was also pleased by the success of certain growers in North Carolina with the Scuppernong grape, a variety of muscadine. He tried their wine in early 1817, praising it as delicious in flavor as any Frontinac (Pinney, 1989).

Though Jefferson planted vines of every description—natives and vinifera both—at Monticello over a period of half a century (the earliest record in his garden book is in 1771, the last in 1822). Yet there is no evidence that Jefferson ever succeeded in producing wine from

them. But he cared more that others should succeed, and, by virtue of his zeal and his eminence, he can be called the greatest patron of wine and winegrowing that this country has seen (Lukacs, 2000; Pinney, 1989).

COMMERCIAL WINEGROWING TAKES HOLD

The Ohio River was the main highway from east to west during the period of early settlement and Ohio had inevitably seen repeated trials of viticulture, suggested by the combination of southward-facing slopes and broad waters. Although settlers had assured the new Congress that Ohio would rival the Rhine and although it has never done so, it was the place of the first considerable wine production in this country, flourishing around Cincinnati from the early 1830s until after the Civil War in 1866 flaunting the naive slogan "The Rhineland of America" (Pinney, 1989).

If Jefferson is the "Patron of the American wine industry": then Longworth is the "Father of American Grape Culture". In 1804 Nicholas Longworth (1782-1863) arrived in Cincinnati from Newark, New Jersey, to make his fortune. Longworth discovered he had a consuming interest in horticulture, but put that aside while he studied law and began a successful practice. He soon found himself doing even better in land development than in law and was soon recognized as a brilliant businessman buying property cheap and turning into millions and by 1828 he was able to quit a regular business life and devote himself to his horticultural interests (Pinney, 1989).

His first commercial success was in 1823 with the Alexander grape grown at Vevay, which Longworth planted on a four-acre vineyard in Delhi Township under the care of a German named Amen. Longworth had the idea that by making a white rather than a red wine from the Alexander he might get a wine superior to that which the Swiss were selling along the Ohio.

However, according to his own records, what he got was a tolerable imitation of Madeira (Pinney, 1989).

Because he considered this a failure, the next obvious step was to try European varieties. He planted these by the thousands, from all sources, over a period of thirty years believing that his primary objective was the development of good native variety. After his unsatisfactory trials with the Alexander and with imported *vinifera*, Longworth got his chance when Major Adlum provided him with cuttings of the Catawba in 1825. Catawba grapes were introduced to winegrowers in the 1800s by Major John Adlum of Georgetown, D.C. Grown predominantly on the East Coast of the United States, this purplish-red grape has a rather sweet flavor. Although usually classified as *Vitis labrusca*, Catawba is widely believed to have at least some *Vitis vinifera* in its background (Amerine & Pierre, 1980; Pinney, 1989).

The basis of Longworth's plan for viticulture was to make use of the labor of the German immigrants flowing into the Cincinnati region and giving it a German flavor. The Germans were in fact doubly necessary: they not only grew and made the wine, they drank it as well. The dry white Catawba that Longworth succeeded in making was unappreciated by Americans used to sweeter and more potent confections (Pinney, 1989).

Like all American winegrowers before and afterwards, Longworth was concerned by the tendency of Americans to prefer wines with European names to those that were honestly, but too adventurously, given names that meant nothing to an uninstructed consumer: "Catawba" was dubious at best. So, at some time in the 1830s, he put labels on his bottles of Catawba with names such as: *Ganz Vorzuglicher* (Entirely Superior); Berg Tusculum (Mount Tusculum, after the actual name of one of his vineyard sites); and *Versichert* (Pinney, 1989).

The explosive expansion of the Cincinnati wine industry occurred after 1842, when Longworth, quite by accident, produced a sparkling Catawba. Even though he did not know how to make sparkling wine, Longworth decided that it would be his means of opening a market beyond Cincinnati. After trying and failing to duplicate his first accidental success, he sent for a Frenchman in 1847. Though the winemaker was French, Longworth was quite firm about his intent to develop a native wine (Pinney, 1989).

By 1848 Longworth had built a 40' x 50' cellar expressly for the production and storage of sparkling Catawba; by 1850 he was turning out 60,000 bottles a year and had plans for national distribution of his wine and by 1852, he had two cellars devoted to his sparkling wine, and production of around 75,000 bottles. The wine was made by the traditional *méthode champenoise*, in which, after a dose of sugar was added to the wine following its first fermentation, a second fermentation was carried out in the bottles, and the resulting sediment cleared by the tedious process of hand riddling. Losses from bottles bursting under the intense pressure of fermentation were sometimes catastrophically high (Pinney, 1989). Yet despite these losses he created new value through distilling the spilled wine into Catawba brandy, which became another success for him.

Longworth thoroughly understood the value of advertising. His letters to the press were progress reports on the promising development of his enterprise. He sent his wine to editors and to the competitions of horticultural and state agricultural societies: as early as 1846 he was exhibiting samples of Catawba at the annual fair of the American Institute in New York City (Pinney, 1989). In common with a number of other Cincinnati producers, he sent samples of his wine to the Great Exhibition of 1851 in London, the original ancestor of and the model for all subsequent international exhibitions and fairs.

Longworth was always the leading name in Cincinnati winemaking, and sparkling Catawba was always the glamorous item. But they could not have long stood alone, and in fact a supporting industry developed quickly. Longworth's part of the whole diminished in proportion as others set up and began to develop their vineyards and wineries. In 1848 there were 300 acres planted, of which 100 were Longworth's; in 1852, there were 1,200, distributed among nearly 300 proprietors and tenants. In 1859, perhaps the peak year in the history of Cincinnati wine-growing, some 2,000 acres produced 568,000 gallons of wine, putting Ohio at the head of the nation's wine production (Pinney, 1989) Almost all of this was white, and almost all from the Catawba, which was now indisputably confirmed as the grape of the region.

Cincinnati wine may be said to have come of age at the beginning of the 1850s. The commercial wine houses, insuring the stability and distribution of the region's produce, were founded then. In 1851 the growers met in Cincinnati and organized the grandly named American Wine Growers' Association of Cincinnati. Its objectives were to publish information useful to growers through its journal, the *Western Horticultural Review* , and to promote the interest of the industry generally, especially by insuring that only pure, natural wine was sent to the market (Pinney, 1989).

The outbreak of the Civil War reinforced and accelerated the process begun by diseases. Though shortages brought high prices for wine, the vineyards were neglected, and new plantings ceased. A visitor to Cincinnati in 1867 reported that the wine culture was somewhat out of favor among the farmers of Ohio. By 1870 the vineyards, though still occupying a substantial acreage, were largely moribund. In that year, the brief flourishing of the Rhineland of America came to a symbolic close when Longworth's wine-bottling warehouse was taken over by an oil refinery (Pinney, 1989).

CALIFORNIA AND THE WESTERN WINE REGION

Despite all the attempts at winemaking by the English settlers in the Eastern United States, the earliest winemaking is credited to the Spaniards of Santa Elena, South Carolina, around 1568. The earliest successful viticulture and the oldest continuous tradition of winemaking, however, was established in the seventeenth century by the Spanish in the vast regions of the Southwest that remained part of the Spanish empire well into the nineteenth century (Pinney, 1989). Here the Jesuits and Franciscans planted grapes as they founded missions, and long before the days of Dufour, Adlum, and Longworth, the Spaniards and Indians settlements from El Paso to the Pacific were drinking the local wine. Even more important, this was wine from *vinifera* grapes, authentic wine as it had been known in Europe. In the dry, hot, stony soils of the Southwest the *vinifera* grew without suffering the afflictions of weather, disease, and insects that invariably devastated it in the East. The great Spanish province of New Mexico, stretching from modern Texas to the Gulf of California, was wholly isolated from the developing country to the east; there was no line of communication whatever between them, and foreign trade was forbidden in the Spanish possessions (LeMar, 2007; Pinney, 1989).

The first wine grapes in New Mexico were planted at the mission of Socorro, on the Rio Grande, by Franciscan missionaries about 1626; the mission, abandoned in 1680 on the great Indian uprising of that year, has now vanished without trace, but the valley of the Rio Grande has remained the site of a permanent viticulture. There is no record of the grape selected by the Franciscans in the earliest days; it may have been the same one they used later, the so-called Mission grape, grown wherever the missions were located in order to celebrate mass. This grape, so important in the history of wine in the Southwest, remains something of a mystery. It is called the *Criolla* in Mexico, and although it is not identified with any grape now known in Spain, it

must trace its origins to Spain; it is most likely a seedling of some Spanish variety brought over in the early days (Pinney, 1989). Whatever its origin, it is not well suited for making table wine, because it is too low in acid and lacks a distinctive varietal character, providing dry wines that are flat and dull. It was a good choice—or a lucky accident—for the early days, though, because it likes hot country, is very productive, and yields quite good sweet wines, much easier to preserve in difficult conditions than low-alcohol dry wines. The Mission is and will remain a significant grape in California for the production of sweet wines. Though one rarely or never sees the Mission grape identified on wine labels today, there were 1,800 acres of Mission vines in California in 1986, linking the modern industry to its origins.

Colonial New Mexico (including much of present-day west Texas and all of Arizona) remained Spanish until Mexican independence in 1821. After 1821 the opening of the Santa Fe Trail brought Americans into the valley of the Rio Grande and reports of its grapes and wines began to make their way back to the East. Small vineyards were scattered along the hundreds of miles of the river from Bernalillo southwards, but there was no trade in wine. The New Mexicans had no transport, few wooden vessels, and even fewer bottles, so that the wine they made was strictly for local consumption. The grape vines grew unsupported and were pruned back heavily to grow as low bushes; this allowed the grower to dispense with any complicated apparatus of posts and wires and trellises (Amerine & Pierre, 1980; Pinney, 1989).

Hundreds of miles to the west of the Rio Grande, along the Pacific coast, the widely scattered small mission communities and the great, isolated *ranchos* of Mexican California were beginning to be infiltrated by Yankee adventurers and traders. Grapes and wine were among the first things to interest them there for in California, an already established tradition of winegrowing by the Spanish. California developed in connection with the missions, directed by

the Franciscans, and was based on the Mission grape. It survived Americanizing and secularizing, flourished under alien hands, and grew rapidly into a major economic force. Since the years just after the Civil War, the story of American wine has been dominated by California, and by an industry inherited directly from the Franciscan founders (Amerine & Pierre, 1980; Pinney, 1989).

The first clear reference to the planting of grapes at a California mission comes from San Juan Capistrano in 1779, ten years after the arrival of the Franciscans in California (Amerine & Pierre, 1980; Pinney, 1989). Los Angeles, developed into the largest and most prosperous of all the mission establishments; it stood first in the size of its winemaking operations and for some the quality of the wine it produced. The original vineyard at San Gabriel was called the *Viña Madre*—"Mother Vineyard"—a name that has created some confusion by its implication that this was the original of all the mission vineyards. Father José Zalvidea, a tough, capable Biscayan, is credited with developing viticulture at San Gabriel, over which he ruled from 1806 to 1827. By 1829 the American merchant Alfred Robinson wrote that the San Gabriel grapes annually yielded from four to six hundred barrels of wine and two hundred of brandy, from which the mission received an income of more than twelve thousand dollars (Amerine & Pierre, 1980; Pinney, 1989).

Whether the missions had wine in sufficient quantity to make an item of commerce, how extensive that commerce was, with whom it was carried on, and how long it lasted, are all questions without distinct answers (Amerine & Pierre, 1980; Pinney, 1989). Until the overthrow of Spanish rule, all foreign commerce was forbidden, so at best the trade in mission wine was restricted to the brief span from the beginning of Mexican rule in 1821 to the secularization of the mission properties in 1833.

Los Angeles, in the brief interval between California's Spanish and American phases, became a quite cosmopolitan village, including miscellaneous Yankees and a sprinkling of Irishmen, Englishmen, Frenchmen, Italians, and Germans. The name of the first American grower in Los Angeles, and therefore in California, is on record. He was Joseph Chapman, from Massachusetts, who came to California on a buccaneering expedition to Monterey in 1818. After his capture and release by the Spanish he moved to the southern part of the state. At San Gabriel he became a general handyman learning at the mission as much as possible about grape growing and winemaking. By 1822 Chapman had moved to Los Angeles and in 1826 he bought a house and planted 4,000 vines (Amerine & Pierre, 1980; Pinney, 1989). For the next decade Chapman grew grapes and made wine. After the secularization of the missions, Chapman moved to Santa Barbara, and then to Ventura County; where he died in 1849 (Amerine & Pierre, 1980; Pinney, 1989).

As California began to draw Americans both by sea and land, others took up vine growing: Richard Laughlin, arrived in Los Angeles in 1828 and planted a vineyard; so did William Logan in 1831 and, later in the decade, William Chard and Lemuel Carpenter (Amerine & Pierre, 1980; Pinney, 1989).

Winemaking in Los Angeles was raised from a domestic craft to a commercial enterprise by a Frenchman named Jean Louis Vignes. Vignes was not only well named but well born, for his native place was Cadillac, a winemaking community in the Premieres Côtes de Bordeaux, where his father was a cooper. In 1831, he left for Monterey where he bought a hundred acres of land (Amerine & Pierre, 1980; Pinney, 1989).

It did not take him long to recognize the inadequacy of the Mission grape. In 1833 Vignes imported European varieties from France laying claim to be the first to take the crucial

step of obtaining better varieties. By making acceptable wine in considerable quantity, Vignes was able to take another step forward in 1840, when, through the assistance of his nephew Pierre Sainsevain he made the first recorded shipment of Los Angeles wines. Sainsevain loaded a ship at San Pedro with white wine and brandy and took it to Santa Barbara, Monterey, and San Francisco (Amerine & Pierre, 1980; Pinney, 1989).

William Wolfskill bought land already planted with vines by an anonymous Mexican and settled down in Los Angeles in 1833. By the time of his death in 1866, he had vineyards and orchards covering 145 acres; the vineyards had been recognized as "best in the state" at the California State Fair in 1856 and again in 1859, and his wine production was up to 50,000 gallons (Amerine & Pierre, 1980; Pinney, 1989).

Vignes and Wolfskill, by virtue of their early start and the large production to which they eventually attained, stand out among the first generation of commercial winegrowers in Los Angeles. A good many other men joined them however, and by the 1850s it is possible to speak without exaggeration of a real industry in and around the city of Los Angeles (Amerine & Pierre, 1980; Pinney, 1989):

- William Workman, an Englishman, and his associate John Rowland, planted vineyards at their La Puente Ranch in the 1840s.
- Hugo Reid, a Scotsman, put in a vineyard in 1839 at his Rancho Santa Anita, and made wine there until he sold the property in 1846.
- Matthew Keller, an Irishman 1851 soon developed vineyards third only to those belonging to Vignes and Wolfskill. Keller also deserves mention as one of the pioneers in importing new varieties to supplant the unsatisfactory Mission, and as the author of a report describing Los Angeles winegrowing in 1858, published in the

U.S. Patent Office's annual report; this was the earliest authoritative description published for a national audience.

Much farther north, winegrowing did not wait for the Gold Rush. Like the southerners, the early settlers in the north had the winegrowing example of the missions before them—San Jose, Santa Clara, and Sonoma especially. The vineyards and wine production of these establishments were, however, much smaller than those of the missions to the south, and though their wines and brandy enjoyed a good reputation: the vineyard at Sonoma, for example, seems to have been less than an acre and of the two vineyards at Mission San Jose that survived secularization, the larger contained only 4,000 vines (Amerine & Pierre, 1980; Pinney, 1989).

The first to grow grapes in the north was the original commandante of Alta California, and later the governor of the province, Pedro Fages, who planted a garden with vines at Monterey around 1783 (Amerine & Pierre, 1980; Pinney, 1989). Despite this early beginning, winegrowing in the northern part of the state was very slow to spread and develop.

At the end of 1848 it was estimated that California had about 14,000 inhabitants, exclusive of Indians. Four years later, after the crisis of gold at Sutter's Mill, the official state census recorded a population of 224,000 (pinney, 1989). The explosive rise in population had a significant impact on winegrowing. From 1849 onwards, winegrowing in California enters on a different order of magnitude from what it had known before. One of the first districts to show the results of extensive new vine planting was the Mother Lode county in Amador, El Dorado, Sutter, and Tuolumne. Vines were planted as early as 1849 at Coloma in El Dorado County and at Bear River in Sutter County (Amerine & Pierre, 1980; Pinney, 1989). By 1856 the four counties named above had some 70,000 vines; two years later the figure was 205,000, the largest number growing in El Dorado County, followed by Tuolumne, Sutter, and Amador.

It was not until the middle of the 1850s that a booming winegrowing industry came to the north. By 1859 the industry was large enough to become visible to the state legislature. An act of that year exempted new vine plantings from taxation until they were four years old, so that growers would not have to pay on their investment until they had a crop to enable them to meet the tax (Amerine & Pierre, 1980; Pinney, 1989). Apart from the useful work of the State Agricultural Society, this was the first official act in favor of the wine industry in California. It was soon followed by another in 1861 establishing a Commission to promote the improvement and growth of the grape-vine in California.

Like most critical events, the introduction of new and better varieties into California did not happen all at once. The U.S. government was actively identifying and disseminating improved varieties of native grapes for the eastern states and Eastern vines were included among those tried in California in the 1850s. Longworth's success with Catawba naturally led the Californians to imitate what he had done (Amerine & Pierre, 1980; Pinney, 1989).

At the end of the 1850s, the northern region of California, where ten years earlier no commercial winegrowing had existed at all, was a serious competitor to the southern part of the state. The census of 1860 reports that California made 246,518 gallons of wine in that year, of this, Los Angeles produced 162,980 gallons; San Bernardino and Santa Barbara Counties, the other contributors from the south, added some 19,000 gallons more. The rest—some 64,000 gallons—came from the new northern regions of the Mother Lode counties and the lands around San Francisco Bay (Amerine & Pierre, 1980; Pinney, 1989).

As in the design of a well-made tragic drama, the high point and the collapse of southern winegrowing occurred at the same moment. There were forty-seven wineries in the first decade; two decades later there were fifty. From a token 2,000 gallons in 1860, the year of the first

vintage, production had reached 300,000 gallons in 1864 and twenty years later, at the moment when the southern wine industry was just about to come to its sudden and unforeseen end, production had reached its highest point: 1,250,000 gallons of wine were produced along with 100,000 gallons of Anaheim brandy (Amerine & Pierre, 1980; Pinney, 1989). In the growing season of 1883, the vineyard workers noticed a new disease among the Mission vines. The leaves looked scalded, the fruit withered without ripening sometimes, it colored prematurely, and then turned soft before withering. When a year had passed and the next season had begun, the vines were observed to be late in starting their new growth; when the shoots did appear, they grew slowly and irregularly; then the scalding of the leaves reappeared, the shoots began to die back, and the fruit withered. Without the support of healthy leaves, the root system, also declined, and eventually the vine would die (Amerine & Pierre, 1980; LeMar, 2007; Pinney, 1989). It seemed to have no relation to soils, or to methods of cultivation, and it was not evidently the work of insects. Not all varieties were equally afflicted, but the disease particularly devastated the Mission, far and away the most extensively planted variety in the southern vineyards. By 1885, half the vines were gone; in the next year, there was not a vine to be seen (LeMar, 2007). The official government report estimated the loss to the disease at in the Los Angeles region at \$10,000,000 (Amerine & Pierre, 1980; Pinney, 1989).

TEXAS AND GROWTH OF WINE IN OTHER REGIONS

Winemaking in the United States east of the Rocky Mountains—or rather east of the Sierra—gradually consolidated and extended the work that had been begun before the Civil War. There were no striking new departures, and the scale of grape growing and of wine production never was large enough to be very visible to Americans, the great majority of whom lived in the eastern states. The ordinary American was still anything but a wine drinker, this growth in wine

consumption was probably related to a growing national population, and, especially, a large immigration. The statistics of per capita consumption show an erratic, but on the whole discouraging, pattern. Another obstacle to rapid growth was an old one—the endemic diseases of mildew and, above all, black rot. Despite a growing understanding of these diseases, they put every grower's crop at risk season after season. The major new factor for eastern wine-making was the competition from California, a significant force by the 1870s; thereafter California grew at a rate unmatched by all the other winemaking territories of the country put together. Still, California was a very remote place throughout the nineteenth century and despite the railroad; the United States was still a largely rural country, with many of the services and supplies now provided by large, nationally organized enterprises were then a matter for local activity (TWMRI, 2005).

The history of viticulture in Texas spans three centuries and precedes the introduction of wine grapes to California by almost a century. Franciscans in 1682 established a mission at Ysleta on the Rio Grande near El Paso and brought with them grapevines from Mexican missions. Subsequent travelers often called attention to the productive vineyards of the El Paso valley, which continued as a leading grape-growing and wine-producing area until the early twentieth century. Viticulture was almost totally foreign to the agricultural experience of most Anglo-American settlers in Texas during the 1800s. However, the influx of European immigrants from wine-producing countries brought a new interest in grape culture and wine-making. These immigrants planted in south central Texas and the Hill Country quality vinifera vines from Europe, which in most cases soon failed (Pinney, 1989; TWMRI, 2005).

Interest in grape culture and wine making expanded in Texas during the late 1800s and early 1900s. In 1895 agricultural statistics showed about 1,800 acres in vineyards that produced

more than 1.5 million pounds of grapes and nearly 1,900 barrels of wine. Thomas V. Munson of Denison generally regarded as the "father" of Texas viticulture, was one of the nation's foremost grape breeders and viticulture authorities around the turn of the century. In the 1870s Munson and a Missouri colleague were credited with saving the wine industry of Europe by shipping carloads of Phylloxera-resistant native rootstocks to France and other vineyard regions (Pinney, 1989; TWMRI, 2005). More important to Texas viticulture, as a plant breeder from the late 1800s to about 1910 Munson developed more than 300 varieties of grapes better suited to the environment of Texas and the Midwest. Most were table grapes or were intended for grape-juice production, though some were said to have merit for wine making. The last wineries closed in 1919, when the state legislature voted Texas legally dry. The owners of the Val Verde Winery survived the dry years by selling table grapes and shipping grapes for home wine making. The winery reopened after the Eighteenth Amendment was repealed in 1933, and for many years was the only winery operating in Texas.

New York, after its somewhat slow start, began to overhaul and soon passed all the other states outside California. In 1870, for example, New York stood sixth in wine production among the states, behind not only California and Ohio but Illinois and Pennsylvania (Kolpan, 1996; NYWCC, 2006). By 1880 New York had closed to third, after California and Ohio; by 1890 New York stood second, and that was where it stayed until Prohibition put an end to the race. Finger Lakes wine was mostly white and came from the same varieties that had been established at the beginning, mainly Catawba and Delaware (Kolpan, 1996; NYWCC, 2006). Sparkling wine continued to be a staple product, so that Finger Lakes "champagne" was almost synonymous with American sparkling wine. At the turn of the century, for example, New York produced more than twice as much sparkling wine as all other domestic sources—California, Ohio, and

Missouri—combined. Some of that New York sparkling wine, however, was based on neutral California white wine imported in bulk to modify the flavors and the acidity of the wine from native varieties—a practice long established and still followed (Kolpan, 1996; NYWCC, 2006).

Michigan, like Ohio, Pennsylvania, and New York, a state where fruit growing was traditional thanks to the climatic influences of the Great Lakes, was a natural region for the extension of the viticulture already established along the Lake Erie shore. A vineyard was planted along the lake at Point de Peau, near Monroe, in 1863 by Joseph Sterling, and a few years later this region was proclaiming itself a new Rhineland (Kolpan, 1996). By 1890 there were a half dozen wineries in and around Monroe, producing wine from the standard eastern native varieties (Kolpan, 1996). The really considerable development in Michigan was around the "fruit belt" in the southwestern corner of the state, where the waters of Lake Michigan tempered the climate to suit the production of apples, cherries, and grapes. A sizeable beginning was made there shortly after the Civil War. By 1880 there were already more than 2,000 acres of vineyard (Kolpan, 1996). Some of the traditional eastern wine varieties—Catawba and Delaware were grown and some wine produced, but Michigan was dominated by the Concord. In 1900, there were only five small wineries in the state, with a production of only 33,000 gallons (Kolpan, 1996). The growth of Michigan as a wine-producing state did not really begin until after Prohibition.

In Missouri, the center of winemaking in the Midwest, there was an expansive mood immediately following the Civil War. The Cliff Cave Wine Company was organized in 1866 to develop 240 acres of vineyard site on the Mississippi River, thirteen miles south of St. Louis. It had cellars in a natural cave and a storage capacity of 100,000 gallons by 1870. The director was Dr. C. W. Spalding, M.D., of St. Louis, the co-editor of *Grape Culturist* (A Treatise on the

Cultivation of the Native Grape. New York: Orange Judd Co., 1894). Another postwar enterprise near St. Louis was the vineyard operated by J.J. Kelley at Webster Groves; there he produced wine from such native varieties as the Delaware and Norton.

By far the most significant and interesting work in Missouri in the nineteenth century—a work of vital importance to winegrowing around the world—came about through the Phylloxera crisis that began its devastation in France in 1867. It happened that Charles V. Riley (1843-95), the first state entomologist for Missouri, was a leading expert on the Phylloxera. He was able, in 1870-71, to establish the identity of the American insect with the unknown creature at large in the vineyards of France, a first step of essential importance in combating the pest (Pinney, 1989). As a resident of Missouri, Riley knew something about native American vines; and along with Munson of Texas, were the first to suggest grafting vinifera to native American rootstocks, assisting the experts of the French government to learn about Phylloxera (Pinney, 1989).

Oregon's wine history dates back to the early settlement of the state in the mid-nineteenth century. Accounts of grape growing activity in Oregon coincide with early winemaking in California, each following their annexation to the United States. However, grape growing in California dates back even earlier to 1779. Henderson Luelling, a noted horticulturist who had crossed the Oregon Trail from the East, had planted grapes in the Willamette Valley by 1847. He allegedly won a medal at the California State Fair in 1859 for a wine made from the Isabella grape, a Labrusca and vinifera cross – an American hybrid thought to have been developed in South Carolina in 1816.

By the 1850s, Peter Britt is known to have grown wine grapes at his Valley View Vineyard. This was located in what is now the new Applegate Valley appellation of the Rogue Valley. A census of 1860 reveals that Oregon's wine production was 11,800 liters (2,600

gallons), not all were *Vitis vinifera*. The wine industry in Oregon fizzled out by 1919 due to the success of the Temperance Movement and the resultant Prohibition (Pinney, 1989).

The rising trend to oppose, obstruct, and forbid the sale of alcoholic in any and all forms had was a severe inhibitor of the desire to plant vineyards and to make wine and through the Temperance movement, the relative feebleness of the winegrowing industry meant that it had little means of surviving.

PROHIBITION AND THE TEMPERANCE MOVEMENT

The Eighteenth Amendment to the Constitution of the United States, forbidding all trade in alcoholic beverages, was ratified in January 1919; a year later national Prohibition went into effect. It remained until the amendment was repealed in December 1933. For the fourteen years of Prohibition the wine industry, like the beer trade and the distilled spirits trade had legally ended (Pinney, 1989). However, liquor of all kinds continued to be made by one means or another, and people, perhaps in larger numbers than ever before, continued to drink liquor of all kinds. Yet the interruption to the normal growth and functioning of winegrowing in this country had disruptive and destructive effects that are still being felt and will continue to be felt for many years to come.

The first wave of laws passed in response to this pressure came in the 1840s: Portland, Maine, voted itself Dry in 1843, the first American city to do so; in 1844, the remote Oregon Territory passed a law forbidding the sale of spirits. However, the most important and most publicized early legislation was the passage of a law prohibiting all intoxicating liquors in Maine in 1851. The "Maine Law," as it was called, became the model for prohibitionists throughout the country. The Maine Law was quickly followed by similar laws all over the Union—Rhode Island, Massachusetts, Vermont, Connecticut, Delaware, Pennsylvania, New York, New

Hampshire, Indiana, Michigan, Minnesota, and Nebraska Territory all followed suit in the next four years (Pinney, 1989; Schultz, 1999).

The intention of the 18th amendment was simply to shut down all traffic in liquor—production, transportation, sales—and essentially it succeeded as the regular trade in wine was concerned. Spirits were far more attractive to the bootlegger than wine could ever be, as such wine was likely homemade. Production of wine in the United States in 1919 was over 55 million gallons; in 1920 it sank to 20 million; in 1922 it was just over 6 million, and by 1925 it reached a low of 3,638,000 gallons (Pinney, 1989). Sacramental wine could be legally made, under license, and wineries that managed to secure a license could maintain a precarious hold on existence. Wine could also be prescribed as medicine. Wine could be made for sale to the manufacturers of vinegar, and to the manufacturers of wine "tonics" of more or less medicinal character. Wine could also be used as a flavoring, in cooked foods and in tobacco, for instance. Since much sacramental wine was fortified and so required brandy (Pinney, 1989; Schultz, 1999).

Besides producing wine for the authorized purposes, some wineries tried to keep going by making juice (in the East especially, where Concord grapes were available) and other grape "products": jams and jellies. There were experiments with "non-vinous" commodities like concentrated juice and wine bricks; the bricks were whole grapes pressed into solid form and wrapped for sale. Both concentrate and wine bricks were sold with yeast tablets, and a caution against allowing illegal fermentation to take place (Pinney, 1989).

Long before Prohibition the movement of wine through the United States had been complicated by the crazy-quilt patterns of local laws. Now, after Repeal, things were made even worse, perhaps more by accident than by design. When the Twenty-first Amendment was drawn up, it recognized the persistence of Dryness in its section 2, which reads: "The transportation or

importation into any State, Territory, or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited." Section 2 was clearly meant to allow *state* prohibition, even at the very moment that *national* prohibition was being swept away (Pinney, 1989; Schultz, 1999).

The immediate question for the winemakers looking over the desolate scene left behind by the Dry years was how to educate the American public and spark a renewed use of wine. However, a unpleasant task faced the American winegrowers: their vineyards were debased, their wineries decayed, their markets confused by arbitrary and unpredictable barriers, and their public ill-instructed and corrupted by the habits of a hard-drinking bootleg style. Add to this the facts Repeal did not take place until the country was plunged in deep economic depression and was followed by the disruptions of a World War II. The American wine industry, passing through the uninterrupted sequence of Prohibition, depression, and war, has had a particularly hard time.

Yet it has, despite all these things, both survived and prospered. The fact it has managed to do so is a tribute to the persistence of many individuals—vineyard managers, winemakers, scientists, publicists, dealers—who worked with a dedication often associated with a cause rather than a mere commerce (Pinney, 1989).

THE RISE OF AMERICAN WINE INDUSTRY POST PROHIBITION

By the time of national repeal through the 21st amendment, which took effect in late 1933, the wine industry was in ruins. Although some wineries managed to survive by obtaining permits to make wines used for medicinal, sacramental and non-beverage additive purposes, production dropped 94% from 1919 to 1925. Following Prohibition, American wine making reemerged in very poor condition. Many talented winemakers had died, vineyards had been neglected or replanted in poor quality grapes, and Prohibition had changed Americans' taste in

wines. Consumers now demanded cheap "jug wine" (so-called dago red) and sweet, fortified (high alcohol) wine. Before 1920, table wines accounted for 3 of every 4 gallons shipped. After 1933, fortified wines were 3 of every 4 gallons shipped. It wasn't until 1968 that table wine sales finally overtook fortified wines, regaining the status of most popular wine category. In 1935, 81% of California's production was sweet wines and the reputation of the state's wines suffered accordingly (Pinney, 2005).

When the American wine industry woke up from prohibition, it found its cooperage had dried out and fallen to pieces, its machines had rusted and become obsolete, its channels of distribution had clogged, its markets had dissolved, and its name had been forgotten. No research had been carried out. No instruction had been given to a younger generation. A tradition had been broken, and an orderly growth cut off. In this condition the American wine industry returned to free life—in the midst of the deepest economic depression that the country had ever known (Pinney, 2005).

The material damage wrought by Prohibition was of course most obvious in the number of American wineries that had gone out of business, fallen into decay, or been put to other purposes. The 917 licensed wineries of 1922 had shrunk to 268 by 1933, a net loss of 649 wineries. A good many of them returned to life after Repeal, but nothing could undo the disruptions that the long suspension had created. By 1933, the last year of Prohibition, California had 177; New York, 50; Ohio, 9; Missouri, 3; New Jersey, 10; a few more were scattered over what were now only eleven other states (Pinney, 2005). Even after Repeal, several states stayed dry: Kansas until 1948, Oklahoma until 1957, and Mississippi until 1966. Seventeen states, for example New Hampshire, chose to remove free-market capitalism by establishing monopoly

liquor stores with limited selections and plain-as-dirt merchandising that discourages respectable housewives from shopping (Pinney, 2005).

There remained local prohibitions that were arbitrary and inconsistent with examples of streets lined door-to-door on one side with taverns and "package stores" and on the other side no liquor was available where the dry boundary ran down the middle of the road. Today 10 percent of the nation's area and 6 percent of the population remain dry (Pinney, 2005).

Anticipating Repeal, speculators soon flooded the legal market with quickly and poorly made wine. New books and articles were published warning Americans about rigid rules that must be followed to serve the proper wine with the proper food from the proper glass at the proper temperature. Faced with bad-tasting products with which to risk committing social blunders and while remaining uncertain about the social acceptance of any alcohol, most Americans stayed away from wine. Hard drinkers stuck to hard liquor (Pinney, 2005). The only group of wines that sold well was the fortified dessert wines. Taxed at the lower rate of wine as opposed to distilled spirits, but with 20 percent alcohol, this group made the cheapest intoxicant available for derelicts and winos (Pinney, 2005).

For what seemed like a generation after prohibition, the United States was little more than an afterthought in terms of fine wine. The country certainly had a long history of grape growing, but that history hardly mattered. Nor did the wines themselves much matter. Large producers, led by E. & J. Gallo, made huge amounts of innocuous jug wine and cheap fortified tippie, but only a handful of small, largely unknown American wineries produced anything remotely resembling the famed European wines sought after by connoisseurs. Then, seemingly overnight, American wine took a huge leap forward in quality and prestige. The nation that had been an afterthought suddenly became an obsession. All at once, Americans

discovered that their country had the potential to make wines that could compete with the world's best (Lukacs, 2000).

This moment arrived in 1976, in Paris, where a young Englishman named Stephen Spurrier ran a small wine shop near the Place de la Concorde. His Academic du Vin had a loyal following, including a considerable number of Americans—foreign service officers from the nearby U.S. embassy, expatriates working abroad, and all sorts of tourists, including California wine producers making French pilgrimages (Lukacs, 2000). Spurrier drank and sold almost exclusively French wines, because like connoisseurs everywhere at the time, he automatically assumed that France produced the world's most interesting and distinctive bottling. Yet a few of the California wines he sampled seemed surprisingly good (Lukacs, 2000).

After visiting the vineyards of northern California in late 1975, Spurrier concluded that something significant was happening there. Virtually no one in France knew anything about it. So he hatched a plan. He decided to organize a tasting of American wines and invite some of France's most esteemed wine professionals to serve as judges. The idea was to publicize the high quality of these wines by testing them against expert palates. So he assembled a panel of nine eminent judges on the patio of the Inter-Continental Hotel in Paris to taste and evaluate twenty wines, ten whites made from Chardonnay and ten reds made primarily from Cabernet Sauvignon. Since Spurrier had promoted the event extensively, a crowd of spectators, including a number of journalists, came as well. When the judges, led by Pierre Brejoux, chief inspector of the Institut National des Appellations d' Origine took their seats, they knew only that some of the wines they would be tasting came from the United States and that the others were French.

The results of the 1976 Paris tasting shocked the wine world. When all twenty wines (twelve from California) had been swirled and sniffed, savored, and scored, Spurrier removed the wrappings from the bottles. To everyone's surprise, including his own, the highest-rated wines turned out to be American—the red a Stag's Leap Wine Cellars 1973 Cabernet and the white a Chateau Montelena 1973 Chardonnay, both from the Napa Valley (Lukacs, 2000). Yet despite all the public rhetoric, Spurrier himself argued repeatedly that his tasting was less a competition than a vehicle for discovery; an opportunity to acknowledge that a young vineyard area can produce top-quality wines, given the same love, interest, skill and money that has been lavished on European vineyards for centuries (Lukacs, 2000).

The Paris tasting had far-reaching consequences. It demonstrated to Europeans and Americans alike that the United States (and possibly other New World countries) actually could produce world-class wines. In America it inspired the wine industry to raise its standards and to begin thinking of "world-class" as a goal, while in Europe it led winemakers to look at American wine with a new appreciation and respect.

Since the success of the Paris tasting, the landscape of American winemaking has changed dramatically. No longer is "New World" wines frowned upon. Rather, the world has come knocking at America's door, and the result has been a cross-fertilization of ideas benefiting wine producers and wine lovers everywhere. America's rise to a position of prominence in the international world of wine has brought foreign vintners to the United States as well as sent American winemakers overseas. American first families such as Ernest Gallo and Robert Mondavi both purchased European operations in 1990, Gallo in Italy and Mondavi in France (Mondavi also became involved in joint ventures in Chile and Italy, in addition to his partnership with Mouton-Rothschild at Opus One in Napa) (Lukacs, 2000). However, for American wine,

even more significant than the role played by its domestic winemakers, has been the influence of foreign investment—individuals and companies from abroad who have recognized the potential for great wine to be produced in the United States.

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