

## Zero-Two-Wine-Three-Eight

The most opinionated wine Newsletter in America

### The bottle of wine of yesterday has today

Book of Bertil 23.01



wooden barrel. Even if the Middle East were absolute masters the art of glass, and produced glass decanters of very high quality, the Occident meanwhile, from the Middle Ages forgot the subtleties of this ancient technique. Glass was far too fragile and difficult to produce, because the only fuel used until the XVII for melting glass was wood, which limited the possibility of very high firing temperatures.



#### PREAMBLE

#### The history of this famous glass bottle

Have you ever closely observed a painting of the Last Supper by Leonardo da Vinci, or by Frans Pourbus, or by Giacomo Raffaelli? You may have noticed the non-existence of bottles of wine on the table or on the floor. Sometimes there are wine decanters and glasses or goblets, nice or not-so-nice, reflecting the fashion of tableware at the time when the painting was produced. But then why no bottles? It makes one wonder if, when it comes to wine, are contents more important than the container? Indeed, this is what I propose, and you shall soon discover the bottle's playful history, through to its ultimate greedy and commercial function. And this may help to answer the existential and almost holistic question: "Can wine have a reason for being without its holy grail, the bottle?"

#### CHAPTER 1.0

#### 23.01.01 The history of the Container

If the vine began to be exploited by man more than 3500 years ago, it was only in antiquity and with the democratization of wine consumption that wine began to be stored in terracotta amphorae. The main disadvantages of the amphorae were their weight, their size, the difficulty of handling and transport, and their fragility. Because of these drawbacks, in 500 BC winemakers started to use barrels, which quickly replaced the amphorae for the storage of wine. (See Newsletter #20 "Oaky Wine"). Although glass already existed at the time, its use was very different from its current utilitarian function.



#### 23.01.02 The history of Glass

The invention of glass probably occurred in Mesopotamia during the third millennium BC with the development of the closed oven. At that time, glass was opaque and mainly used to make fake gemstones. But then over the course of the second millennium, it was poured into molds to obtain hollow containers. It was during the imperial era that the Romans made jugs and glass decanters to contain wine, but not to preserve it. These jugs and decanters were used as serving vessels at the table after the wine has been transferred from an amphora or

#### 23.01.03 The glass bottle

The glass bottle as we know it today is not due to an advance in science, but to the consequence of a simple political decree taken in England in the seventeenth century. This decree obliged the use of coal to that of charcoal to prevent deforestation of the country. Charcoal is a fuel that burns at a very high temperature, and thus revolutionized the world (it is the cause of the origin of the industrial revolution) and allowed the invention in 1632 by Sir Kenelm Digby of the bottle in very thick black glass, with a large solid base. At the time the size and volume of bottles were not regulated, and their inconsistencies did not allow them to become a reliable measuring container for the wine trade. It was not until 1728 that an international trade agreement legislated on its approximate measurement, and in 1792, after the invention of the metric system, that a definitive agreement established the bottle of wine at 750ml.

#### CHAPTER 2.0

#### 23.02.01 A format that is not metric

As the British say, "He who pays the piper calls the tune." The main importers and merchants of wine in the eighteenth century were the English. Because they would not change their measurement from Imperial to metric, the wine producers in the rest of the world, and in particular the French and Portuguese, were forced to find measurements of containers that could adapt to both standards of measurement. So, if the barrel of commercial wine was established at 50 imperial gallons, it represented in metric 225 liters. 1 gallon equals 4.54609 liters and thus divide into equal number this gave a measurement of 750 ml. So, a Gallon represented 6 bottles of 750ml and therefore 300 bottles for a barrel of 50 gallons. In the same way, this is the reason why the wine is marketed in boxes (cardboard) of 6 or 12 bottles, so it is in the format of the market value of an imperial gallon. A case of wine therefore represents two imperial gallons. That is exactly 9 liters X 25 = a barrel of 50 gallons. It is for this reason that the largest formats are multiplications of 750. Magnum= 1.5 L, Jeroboam 3L, ... Melchior 18L (4 gallons) etc.



### A little anecdote:

Originally the wine labels displayed a liquid volume of 730 ml (73cl) on the label, because if the bottle was of a volume of 75 cl, after the installation of the 49 mm cork (or 2 inches...hahaha), there was only 73cl of liquid remain. It was not until 1975 that the standardization of bottles was 770 ml (77cl) to standardize the volume to 750ml.

### 23.02.01 Why is the glass bottle green or white?

If the glass bottle was invented in England, it was to adapt to the wines produced at the time in the British Isles. Sparkling wines of method called today "Traditional or Champenoise" (see the newsletter #3 A Very Sparkling Subject) required bottles of great resistance to atmospheric pressure (fermentation) but also of very opaque color because these wines were, and still are, very sensitive to direct light that can transform their tastes and their colors. Indeed, even just a few minutes in the sun can be enough to give them an unwanted "taste of light". Red wines are less sensitive to light, thanks to tannins, but are still bottled in opaque green containers to preserve them in longevity. As for white and rosé wines that are very sensitive to light, they are often bottled in transparent glasses or only very slightly tinted. What for?

### 23.02.02 And the form then?

In antiquity, the first bottles had the shape of a light bulb, with a long neck and a wide mouthpiece. The bottle transformed over time into a flattened sphere to ensure a good base and a good grip. Then the shape evolved again thanks to the standardization of glass molds and became more cylindrical for storage and transport concerns. The first commercial bottles were from the Champagne region, which explains their very particular shapes, close to the original shape of the blown bottle. As the shape of the bottle is not regulated, each region produced bottles typical to their geographical origins according to the use and their needs. Its forms over time have become universal marketing standards. A flat bottom did not allow a good balance of the bottle, and so champagne bottles and red wine bottles have a concave bottle bottom that is curved bottom. This is called the "sting" and was found to be the best way to have a stable bottle. This "sting" is also convenient for red wine service, in that it requires a decantation, or a so-called "tonging" service, by putting your hand under the bottle and pushing your thumb inside the sting. Most champagnes and other sparkling wines have a deeper "sting" because, according to the traditional method of winemaking, the bottles must be turned manually by a quarter turn every day during "riddling".



### 23.02.03 Universal design

Today, on a commercial level, all winegrowers in all countries combine their choice of bottles with the regional styles of wine they market. Thus, regardless of the geographical origin of production, a Bordeaux style wine (Cabernet Sauvignon, Claret etc.) will use the bottle called "Bordeaux". For Rhône and Provençal grape varieties, there is the "CDR" bottle. For Alsatian and German grape varieties, the "Alsatian" bottle. For Pinot Noirs and Chardonnay, the "Burgundian bottle".



### 23.02.04 The Californian bottle

The so-called "Napa bottle", which is quietly disappearing from the market, is a perfect example of the modern consumer culture of the mid- to late 20th century. This bottle is slightly taller than the Bordeaux bottle and weighs twice as much. This is because the consumer is first influenced by the visual appeal of the bottle, and then will compare the monetary value of the two identical products by their weight, which implies volume (even though both are exactly 750ml). It is also for this reason that the bottle of red wine is dark green or very opaque in color—this hides the imperfections of solid precipitation in the wine (sediments). The bottle of rosé or white wine are transparent in color simply to influence your choice by the subconscious relationship of attraction you have with color and purity. This is called an added value, the "packaging".



## CHAPTER 3.0

### 23.03.01 Ecological impact

We now know that the greatest volumetric impact of carbon dioxide emissions in wine production come from the production of glass bottles, packaging (boxes), and transport (See Newsletter #13 "Supreme Cork ruling: TCA vs. Stelvin"). It is therefore clear that for vineyards, eco-responsibility stops at the bottling machine. But the "King of All Powerful" consumers are not ready to change their habits of perception, and they continue to impose on winegrowers that the container is much more important than the content. So, are we still looking for the "Holy Grail" in 2023?



### 23.03.02 Solutions for tomorrow

Now, I feel that I have just awakened your eco-anxiety syndrome, and your guilt has consumed yet another wine bought in a glass bottle with a cork. You may tell me that you prefer more ecological bottles, from recycled glass or that are less heavy, "Stelvin" or "Composite" caps, and bottles without capsules, or that are protected simply by a wax cap. That you support short supply chains, and ecological transport. I believe you, well done! But unfortunately, all this, and even the cardboard bottle or organic polymers (vegetable plastics), are not sustainable solutions, they only minimize a much bigger problem. This is just a thought about a festering wound.

### 23.03.03 Radical Solution

Yet there are far more effective and radical solutions. Knowing that more than 80% of the wines purchased are consumed within 48 hours of their purchases, it would be enough to return to the old and simple concept of selling wine in bulk. Today there are containers (kegs) similar to those used for beer "on tap", and particularly the KeyKeg process (ISO 18604) which allows wine to be shipped in an ultra-light container of 20-liter format that is completely recyclable, and moreover preserves the wine in all its freshness and quality for more than three months after the start of its use. So, would the bottle become a permanently reusable container again, as it has been for more than 2500 years?



### Epitafe Deosebite

For this it would be enough for the state of Massachusetts (and the rest of the American states) to change their laws on the sale and bottling of wines and spirits, and thus allow the right of bottling in stores. Will our climate emergency force our politicians to change their greedy and backward policies for taxes and puritanism? Only God knows, but I do hope so.

\*Memorandum:

*My words and opinions in these newsletters are and would always be personal, and I intend to offend.*

*I always accept that others have the full right and duty to challenge me, to argue, and, if it is necessary, excommunicate me from their beliefs (often dull and hollow) because I would act the same way if it were the other way around.*