



Beautiful Barrels

by Ellen Wallace

In Paris in the 1980s, when I first met wine barrels, they were usually weary, weathered things standing outside wine bars in the financial district, holding up stemmed glasses and currency traders who were short on sleep. My first encounter with a barrel doing its real job, aging a Burgundy wine to perfection, left me in awe.

It was in Burgundy's Côte d'Or, a mythic place for a young American wine lover, in the cellar of Daniel Senard, one of Aloxe-Corton's leading wine producers. He'd been recounting how the best wines, some very old, had been hidden from German officers who occupied the family home during WWII. "Would you like to see the cellar?" he asked.

I wasn't prepared for the emotion provoked by the dusty, cobwebby, encrusted old bottles. The silence, the long dark rows, the vaulted stone spaces where the fine bottles were marking the years in peace. But it was Count Senard's beautiful barrels and vats, made from ancient French oak trees, that really charmed me with the warmth of their

old wood and the sense that they were the guardians of the lively wines as they began to settle down and mature into greatness.

Royal forests

Barrels are a world apart, even in the universe of wood. None are finer than those made in France, with wood from the extraordinary forests planted by the late 17th-century visionary Jean-Baptiste Colbert, Louis XIV's finance minister, who was centuries in advance in the matter of sustainable development. Colbert's forests were planted with a very long view: the first harvests were envisioned for some 200 years later, and his clever harvesting schedule ensured that the same forests would continue to give France wood for another two centuries after that, to build the world's finest ships.

Shipbuilding moved on to metal, however, and the happy beneficiary was the wine industry, which learned to treasure French barrels made from those royal forests. During my wine-writing travels I've spotted the names of great French coopers large and small in the barrel rooms of sleek high-tech wineries in Chile and California, of vast do-

maines in southern Portugal, famous wineries in Tuscany and the jewel-box cellars of handcrafted wines in Switzerland.

All these top wineries swear by French barrels, made by Taransaud, Seguin Moreau or smaller artisans. French grain is tighter, they say, the quality impeccable and the aromas these Gallic barrels share with the wine are beautiful.

Romance and science

Today we may wax romantic about wooden barrels, vats and casks, but for millennia they were simply practical shipping and storage containers. They could be rolled onto boats, stacked in cellars and, while they allowed some beneficial aeration, the amount of evaporation from a well-made barrel was minimal.

Ancient Greeks and Romans knew that wine was often improved by spending time in wood, although they wouldn't have known the reason was that wood softens tannins. But wine was not intentionally aged—it had to be drunk young, before it spoiled. The Romans began to use wooden barrels rather than terra cotta amphorae and



Photo © Patricia Cottier-Pellegrin

other more fragile containers only in the 3rd century, picking up the idea from the conquered Gauls.

Wine spoilage remained a problem for

centuries, until Louis Pasteur identified the source in his 1866 treatise *Studies on Wine*, showing that fermentation is due to the growth of microorganisms. With spoilage

under control, maturing wine in wood became possible.

But barrels were still used mostly for fermentation and shipping; wines were aged in bottles, and the practice of barrel aging developed very slowly over the decades. Early on, French coopers bought much of their wood from the great forests of northern Europe, Canada and the US, until Colbert's forests were finally fully operational in the early 20th century.

Subhead

At the same time, scientific winemaking was gaining ground, giving France's wine producers tools to improve their wines. The Bordeaux School of Oenology was founded in 1880, led by one of Pasteur's students. France's coopers got a head start, and by the mid-20th century they were widely considered the best in the world—specialty carpenters who knew the wine business well.

The targeted use of barrels and vats for aging wine finally took off worldwide only in the 1980s. The wine world outside of France raced to use French barrels after the revival of French wines with the great vintage of 1982. Then came the success of California and Super Tuscan wines with their pronounced oaking. By 2000, French barrel production had nearly tripled, peaking at 800,000 a year.

The sudden spike in demand came too late to save thousands of small coopers forced out by a long downturn in their industry. Since 1900, orders had fallen steadily due to two significant changes: once narrow-necked bottles and corks became commonplace, consumers who once bought small barrels for their own cellars gradually began to buy and store wine in bottles; and new containers for fermentation, from cement to stainless steel, appeared, touted (not always correctly) as more hygienic.

For a while there was some conjecture that, because France could not turn out enough barrels to meet demand, American wood might replace the classic French. But that didn't happen, and French coopers like Jean-Marcel Jaeglé, near Macon, say that today each has its niche. French oak is sought for delicate wines that have great potential to age well, while American wood is the perfect match for hearty reds from sunny southern climates, with their high alcohol levels, and also for bourbon and other spirits.

The story of barrels and wine today is one of a heady love affair, in which producers can

choose used barrels or buy new ones from a specific forest, and select the type of toasting the wood gets to influence the notes and aromas of the wines. More delicate wines, including some whites, cannot be oaked for very long, while reds with rough tannins are greatly helped by time in wood.

The modern invention of small, new barrels has given the industry far greater flexibility and consumers a richer range of wines. A book published by a Swiss wine museum not long ago put the shift neatly: the work of barrels has gone from “*du contenant au contenu*”—from container to contents.

The cooper's craft

In the winemaker's world, there is more to a barrel than its cylindrical shape. The craftsmen who make barrels are called coopers in English, *tonnelliers* in French. Those who make much larger wooden vats (*fûts* or *foudres*) are still coopers in English, but *foudriers* in French.

Barrels are made in different shapes and sizes: 225 liters for Bordeaux, 228 liters for Burgundy, other sizes that can run as large as 700 liters. Smaller *barrisques*, a popular generic term, are legally called *fûts de chène* when they define quantities in commercial transactions. A *tonneau*, usually called a vat

in English, is similar to a *barrisque* but larger, takes longer to make and lasts longer.

Marc Grenier is a foudrier with a five-man operation near Beaune, whose business has grown in parallel with recent interest in organic wines. His large, handmade wooden containers are all custom-built, each taking more than 100 hours to construct. In 2012 his firm made 100 round *cuves* and 60 oval *foudres*, he says.

The first step is meeting with the wine producer to understand the kind of wines he wants to make, the space available and fu-



ture plans. More producers are shifting back to wooden vats for fermenting, Grenier says, because they want a natural material. “We’re getting back to the basics,” he notes, “returning to a kind of logic that was part of traditional winemaking,” but taking into account advances in science and technology.

Grenier doesn’t make small barrels, but 42 other French firms large and small do. The business, with annual turnover of €300 million, employs about 1,500 people who make a total of 500,000-600,000 barrels a year.

The biggest company in France is Seguin Moreau, based in Cognac (with a subsidiary in California’s Napa Valley). Taransaud Tonnellerie, based near Cognac, is about half the size, but both have strong ties to Bordeaux and the cognac industry. The top ten also include family-run companies such as Nadalié, in Bordeaux.

Jointing and toasting

Dargaud & Jaeglé, south of Macon in Burgundy, is a small affair with a large reputation among wineries. The company is experiencing a turnaround along with much of the industry, says Jean-Marcel Jaeglé. After a boom up to 2000, with double-digit annual growth for 20 years, the global economic crisis hit hard, but the rebound has begun. “When the crisis hit, cellars couldn’t afford new barrels. The lower end of the market, the producers who were only looking for a

boisé, or oaked, effect, disappeared. Today we’re working with more noble wines, and focusing on quality. We’re all trying to ensure that everything intrinsic to the wine remains, and that what we’re doing with wood enhances that.”

Outside the factory, enormous stacks of oak planks from hand-picked trees—split, not sawed—are left to the elements, including essential rain, to be cleaned and seasoned for at least two years before the wood is worked.

Once the wood is ready, the barrel-making process begins—at Dargaud & Jaeglé it takes just hours from start to finish, as the wood passes through a series of work stations. The planks are cut into staves the same length but slightly different widths. Their outer faces are machined, the middle section of their inner faces is hollowed, and their edges are planed in a process called jointing. The angle and the quality of the jointing determine the water-tightness, the shape and the capacity of the barrel.

The staves are laid out by hand, alternating narrow and wider, and then the rose-setting, or assembly, is done in a machine. Temporary hoops are used to hold them in place during a process that is particular to Dargaud & Jaeglé—a 20-minute hot water bath before the barrels are toasted.

The most extraordinary part of the operation is the toasting, when the inside of the barrel is fired according to agreed specifications—firing can be varied in time and temperature to bring out different aromas in the wood.

The untoasted bottoms go through a similar construction process. They are added to the barrels and tested under pressure to be sure the seams are watertight. The barrels are sanded with an automatic lathe, and only then do they receive their final hoops, which are permanently set using a hydraulic press. Finishing touches are done, such as adding wooden hoops for Bordeaux and Burgundy barrels.

The end product is an elegant barrel, beautiful enough to serve as a piece of furniture.

In a recent Taransaud tasting session, I sampled the same wines treated in barrels toasted differently. A Bordeaux from a classic barrel gave a wine that had a quiet nose but was noticeably fruity. The same wine from a barrel toasted longer at a lower temperature had more elegant, better integrated fruits, and will probably be ready to drink sooner. It’s clear that 21st-century barrels have the potential to give us wines such as the past has never known. ■

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