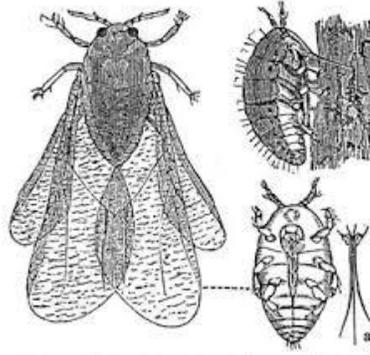


Snow on Wine

HOW LOUSY ROOTS left us FOXY WINE The great 19th Century Wine Blight of France By Dr. Jeffery Snow



Nothing about the “Great Wine Blight” makes sense until we know that ALL grapes belong to the genus *Vitis*. *Vitis vinifera*, originally was found only in Eurasia, includes all of the 1368 known varieties of European wine grapes cultivated around the world. East Asia has *V. amurensis*. Native to North America are *V. labrusca*, *V. berlandiere*, and *V. riparia*¹. A tiny insect, like an aphid, now called *Phylloxera* or “grape root louse,” was also native to the Eastern part of N. America (but not California). *Phylloxera* insert its proboscis into vine roots sucking out the sap, simultaneously injecting a toxic saliva. American vines are tolerant, having coexisted for millennia, but the European *Vitis vinifera* quickly withers and dies¹.

The first evidence of incompatibility of European vines (*V. vinifera*) and something (later shown to be *Phylloxera*) in East Coast American soil came in the late 1500's when French colonists in Florida repeatedly saw their European vines die. Unable to exist without wine they settled for drinkable but “funny tasting” grape wine from N. American vines already growing well there². This pervasive taste associated with N. American grapes is called FOXY. Jancis Robinson describes “foxy” as candied fruit plus wet animal fur and something like Concord grape jelly¹.

Over the next 3 centuries many N. American plants, including grape vines, were brought back to Europe and cultivated and bred. Despite the known problem with *V. vinifera* in N. America, no one took precautions to prevent transplanting that problem to Europe. Indeed it took nearly 3 centuries to show up in France. Many speculate that *Phylloxera* didn't survive long sailing voyages, but the faster speed of steam ships in mid 1800's got them there quicker, and alive.

The Blight started in 1863 in The Languedoc and marched across France. The cooler northern countries were largely spared, warmer Europe was variably affected, but its worst effects were in France where over 40% of vines and vineyards were lost by 1870, and the economy collapsed³ with wine production falling 75% by 1889¹. It took several years for Botanist Jules-Emile Panchon to discover (and Charles Valentine Riley to confirm) that the cause was *Phylloxera*². French wine growers desperately tried all manner of chemicals and pesticides. Hoping *Phylloxera* would be eaten up, some placed a toad under each vine and others allowed

chickens to run free among the vines. These efforts failed. Some flat vineyards could be flooded during dormant season, drowning the phylloxera, but most vineyards are on slopes. Some vines did survive in very sandy soil where Phylloxera does poorly. Vineyards in Sintra, Portugal have such deep sand. And when Julie and I visited, we tasted some recently made wine from thriving vines which pre-dated Phylloxera.

Fortunately, the various species of the *Vitis* genus are compatible for cross grafting. And in the end grafting European varieties onto American rootstock was the only way to save *V. vinifera*. But there were issues. Although Phylloxera resistant, some American vines didn't do well in chalky French soil. Some gave the grafted grapes hints of the "foxy" taste. Botanists cross breed different American species and European vines, finally workable rootstock was found. Then began the expensive and time-consuming task of replanting destroyed vineyards with *V. vinifera* on various resistant rootstock varieties. Some are still whining that wine from grafted vines is just not as good.

So, happy ending, right? Well not totally. The story continues even here in the USA. California originally had no Phylloxera and was planted in 17th & 18th Centuries with *V. vinifera* varieties on own root (that is ungrafted). Eventually Phylloxera arrived and replanting with vines grafted onto resistant root stock occurred. Recently Phylloxera strains have adapted and now attack the AxR rootstock most common in Napa Valley. So replanting on newly developed rootstock was required. Phylloxera keeps mutating and adapting and eventually root stock seems to lose resistance. Wine scientists at our Universities attempt to keep up, but just as bacteria develop antibiotic resistance, so the root louse conquers resistant rootstock. And it seems to happen faster in warmer climates, so Global Warming may hasten the problem⁴. Oregon and Washington, with cooler climates, have not had Phylloxera until recently and are on own root.

So will the story repeat here? Vintners are concerned and beginning to consider grafted vines in new plantings and replantings⁴.

Oh, and that thing about grafted vines producing less tasty wine? Well, the grafted Cabs, Merlots, Pinots and Chardonnays from Napa can be tasted side by side with the same varieties on own root from Oregon and Washington – at least for now. So do the test yourself and see.

1. J. Robinson, Julia Harding, Jose Vouillamoz, (2012) *Wine Grapes*, introduction pp XI – XXI.
2. G. Bazille, J.-E. Planchon and Sahut (1868) "[Sur une maladie de la vigne actuellement régnante en Provence](#)" (On a disease of grapevines presently prevailing in Provence), *Comptes rendus*, **67** : 333-336.
3. Wikipedia, "The Great French Wine Blight".
4. Personal communications with: Lori Mueller @ Mueller Winery, Windsor, Ca; Carmen Dehlinger @ Dehlinger Winery, Healdsburg Ca; and estate vine plan @ Bethel Heights Winery, Willamette Valley, Or.