Carignan – the unmasking of an imposter

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The story behind the recent investigations that have proven that, at least in South Australia, any Carignan planted or propagated from vines planted before 1966 is unlikely to be true Carignan, and some advice on how to spot the pretenders.

INTRODUCTION

The 1970s were a time of great change for the winegrape variety scene in Australia. It was the decade when new imports such as Chardonnay, Merlot, Colombard, Ruby Cabernet, Petit Verdot and Traminer started to become prominent. It was also the time when many of the varietal mistakes were corrected. One example of this was when Clare Riesling was shown to be Crouchen in 1975 (Antcliff 1975). In 1976, French ampelographer Paul Truel visited vineyards in many regions, accompanied by Allan Antcliff, of CSIRO (Australia's foremost ampelographer of the time). Their findings were surprising, to say the least. For example, all Semillon in Western Australia and the variety known as Albillo in South Australia turned out to be Chenin Blanc. Much of the Malbec in SA was Tinta Amarella, and most of the Malbec in Victoria was Dolcetto. Cabernet Gros in SA was actually Bastardo syn. Trousseau and many other varieties were found, for the first time, to be present in Australian vineyards (Antcliff 1977). Most importantly, in the context of this story, the Carignan in SA turned out to be Bonvedro. This finding was not a total surprise because Boehm and Tulloch in *Grape Varieties of South Australia*, published in 1967 stated "... there is some doubt about the authenticity of the South Australian Carignan. It does not exactly fit the European description...the lower surface of the leaf carries more wool". This was a significant discovery because there were at least 100ha of Carignan in SA in the early 1970s, most of which was planted in the Barossa Valley.

The consequent varietal name change process seems to have taken place relatively quickly, without much ado. However, there were a few instances where producers retained the former varietal name (referred to as an 'invalid synonym' in Dry and Coombe 1989) for one reason or another. Perhaps it was simply in ignorance because apart from the single article in the *Australian Grapegrower and Winemaker* (Antcliff 1977), there was neither much publicity nor any program by the governing bodies to expedite the changes.

THE UNMASKING

Fast forward to 2013 when Peter Dry tried the first vintage of the Ulithorne Wines' Immortelle, made by Rose Kentish, in Corsica, in 2011. This wine was a blend of Syrah (synonym Shiraz) with Nielluccio, Carcajolo and Minustellu. The latter three are Corsican synonyms for Sangiovese, Bonvedro and Graciano, respectively, so it would be possible to make the same blend here. At the same time, we had seen an increase in

DNA testing has confirmed that what Angove's believed was Carignan growing in its McLaren Vale (top) and Nanya vineyards in the Riverland (bottom) is, in fact, Carignan. The variety was first planted by Angove's in its Nanya vineyard between 1969 and 1970 from cuttings sourced from the South Australian Department of Agriculture. Cuttings from these original vines were planted last year in the company's Warboys Vineyard, in McLaren Vale. Photos courtesy Angove's.

producers of Carignan wine, particularly in the Barossa Valley—some of whom claimed to be using fruit from "...more than 100-year-old vines". Also there were articles in 2013 by at least one prominent wine writer extolling the virtues of Carignan, particularly the wine from old vineyards in Australia. And finally, there had been an increase in enquiries for Carignan planting material.

This got us pondering just how much Bonvedro was actually left in SA and how much Carignan really was Carignan. Armed with the knowledge that the first true Carignan vines may not have been imported into South Australia (originally from California) until the mid-1960s (Nicholas 2006), we decided to investigate further.

In spring of 2013 we visited two of the largest blocks of Carignan in the Barossa Valley. They are both used as a source of fruit by several wine producers. We will call them blocks A and B for convenience. Block A was planted with cuttings taken from an old vineyard (planted before 1962). Block B (said to be 120 years old) has been used as a source of cuttings for other vineyards, for example, for top-working carried out in 2008 by Shadowfax Wines, in Victoria. Based on published descriptions and photographs of Carignan (Galet/Morton 1979, Kerridge and Antcliff 1999) and by comparison of samples of leaves from known Carignan vines, we concluded that Block A was Bonvedro but Block B didn't exactly match with any known variety.

Samples were then sent to the Institut Francais de la Vigne et du Vin (IFV), in France, for DNA analysis. The results showed that Block A was Bonvedro and

Block B was Mataro. The Mataro result was definitely a surprise because, while it had some features in common with Mataro, it was not an exact ampelographic match.

HOW MUCH TRUE CARIGNAN EXISTS IN AUSTRALIA?

The following timeline summarises the facts that enable us to answer this question.

- 1866: Bests of Great Western plant Carignan vines in nursery vineyard from material sourced from Geelong (identity confirmed by DNA analysis in 2011).
- 1877: Phylloxera detected in Geelong.
- 1878: South Australia bans the importation of grapevine material (Boehm 1996).
- 1942: Francois de Castella reports that there are 240ha of Carignan in South Australia.
- 1963: South Australia lifts ban on vine imports (Boehm 1996).
- 1966: First official import of a Carignan clone (D9V11) into South Australia from UC Davis California; followed by imports in 1968 (F11V11), 1974 (D9V13) and 1975 (F2V15). No DNA typing of the clones has been undertaken to our knowledge.
- 1976: French ampelographer Truel confirms that (non-UC Davis imported) Carignan in South Australia is actually Bonvedro.
- 1980: Bonvedro and Carignan listed in the Australian Wine and Brandy Producers Association report of 1980 with 207t and 858t, respectively. For Bonvedro, 84% was from 'irrigated Victoria' and 16% 'non-irrigated SA', whereas for Carignan, 49% was from 'irrigated SA', 26% 'non-irrigated SA', 14% 'irrigated NSW' and 10% 'irrigated Victoria'.
- 1987: Vine Pull Scheme in SA.
- 1996: *South Australian Vine Improvement Scheme: Registered Source Areas for Planting Material* publication does not list any clonal Carignan source blocks (Nicholas *et al.* 1996)
- 2014: The 2014 *Australian and New Zealand Wine Industry Directory* lists 18 wine producers who use 'Carignan': 11 in the Barossa Valley, three in McLaren Vale, and one each in Margaret River, Riverland, Riverina and Mudgee. The Phylloxera and Grape Industry Board of SA website lists 'Carignan' with 5.09ha in the Barossa Valley, 4.26ha in the Riverland and 2.61ha in McLaren Vale—but only 0.57ha of Bonvedro, in the Barossa Valley.

Based on the above information it appears that, at least in South Australia, any Carignan planted before 1966 or propagated from vines planted before 1966 is unlikely to be true Carignan. The only possible way that it could be true Carignan is if the material had entered South Australia prior to the ban on importation of vine material into the state in the late 1800s. This means that the 240ha of Carignan reported by de Castella in 1942 is likely to be the Bonvedro that Truel identified in 1976.

Any vineyard planted using material imported from UC Davis is likely to be Carignan. This assumes that these imports are actually true Carignan because, to our knowledge, there has been no DNA analysis with use of French standards. However, the ampelographic characteristics match closely with those in Galet/Morton (1979). Given that the area of Carignan has fallen sharply in the 40 years since the 1966 importation and the fact that there have not been any registered source blocks of the Californian imports since 1996 (thereby forcing growers to access bud-wood from old vineyards), it is unlikely that there is much true Carignan in South Australia. As for the other states, the situation is less clear.

Table 1. Comparison of mature leaf characteristics of Carignan and Parraleta, synonym Bonvedro

	Carignan	Parreleta
Lobe number	5	3 to 5
Petiolar sinus	Narrow U, generally open	Lyre, closed
Hair on lower surface	Sparse	Dense
Petiole length (relative to blade)	Short	Long
Other	Crimped at petiolar sinus	Not crimped

THERE IS GOOD NEWS AND THERE IS BAD NEWS

The good news is that we have a 'new' variety that exists as old and venerated vines in the Barossa, and perhaps elsewhere. Bonvedro is widely dispersed around the Mediterranean and on the Iberian Peninsula. Robinson *et al.* (2012) used the prime name Parraleta because this is what it is known as in the region of Somantano in north-eastern Spain, its likely place of origin. Other synonyms include Carcaghjolu and Carcajolo Nero, in Corsica (France); Carenisca, in Sardinia (Italy); and Bomvedro, in Portugal. DNA analysis has also shown that it is the same as Tinta Caiada, in Alentejo. In 2010 there were 162ha as Tinta Caiada, in Portugal; 119ha as Caricagiola, in Corsica; and 56ha as Parraleta, in Spain (Anderson 2014). In both Portugal and Spain there has been recent expansion due to renewed interest—and some consider that Parraleta makes better wine than Carignan. Coincidentally, the Riverland Vine Improvement website lists Tinta Caiada as a recent import from Portugal.

The other piece of good news is that there is a quasi-clone of Mataro that obviously makes good wine. Shadowfax winemaker Matt Harrop says that it " ... doesn't look like the Mataro that we have here. Also it ripens later and the fruit tastes different." Perhaps this quasi-clone is a descendant of the vines that used to be called Morrastel in SA. When de Castella visited SA in 1941-42 he noted that Mataro and Morrastel were very similar in appearance. Subsequently, Truel confirmed that Morrastel was indeed Mataro, based on ampelography (Antcliff 1975).

The bad news is that producers of Carignan will need to determine if they have true Carignan or not. This can only be done with certainty by DNA analysis. This is done by sending a sample (namely a smear of green tissue on an FTA card—treated filter paper that can store nucleic acids at room temperature) to a diagnostic laboratory. Yalumba Nursery's preferred lab is IFV, in France. The cost is approximately A$130 per sample. Of course, if required, wine labels will need to be changed to comply with regulations set by the Australian Grape and Wine Authority (formerly known as Wine Australia).

In the meantime, ask yourself when does your Carignan ripen? If it is very late then it could be true Carignan (or Mataro). If it is mid-season then it is not Carignan and most likely to be Bonvedro (or something else, e.g. Bastardo).

Also you could do some ampelography yourself. Carignan and Bonvedro share more morphological similarities than differences—but those listed in Table 1 are the best ones for mature leaves. The crimping of the leaf blade near the petiole is a distinctive characteristic of Carignan. The photograph of the Carignan leaf in Kerridge and Antcliff (1999) clearly shows this feature.

CONCLUSIONS

There will be some producers of Carignan wine who would have preferred to let sleeping dogs lie. Perhaps some already suspected that they didn't have real Carignan. It is our belief that it is better to sort this out now while there are still relatively few producers—and we certainly do not want a repetition of the Albarino/Savagnin situation. If you have a 'Carignan' vineyard that is older than 1960, or planted with cuttings sourced from old vineyards, i.e., planted before 1960, you should get the DNA checked. If it turns out that you actually have Bonvedro, make the most of it. And perhaps we should adopt the prime name Parraleta.

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