

Portland
Winemakers
Club



Portland Winemakers Club

April 2019
"Bill's Meanderings"

Scheduled Meetings

January 15, 2020 Crush
Talk / Planning

January 18, 2020
Annual Gala – At Parrett
Mountain Cellars

February 19, 2020
Bordeaux Tasting

March 20, 2019
Speaker: John Davidson,
Walnut City

April 17, 2019
Barrel / Carboy Sample
Tasting.

May 15, 2019
Speaker: Jeremiah Deines
on cider production

June, 19, 2019
Best practices; member
demonstrations of tips &
tricks

July 13 2019
Annual Picnic

July 27 2019
Tour

August 21, 2019
All Whites Tasting

August 24, 2019
Tour

September 18, 2019
Other Reds Tasting

October 16, 2019
Pinot Noir Tasting

November 2019
No Meeting

December 4, 2019
Planning, Tours, Speakers,
Events, Elections



A typical South Australia Gum tree lined country lane in the McLaren Vale wine region

News Flash! Battle of the terroir.

A lawsuit was filed recently in the Oregon District Federal Court by a Yamhill County vineyard owner alleging that his neighbor has diminished the value of his property by the crop he is growing. The plaintiff is claiming that the "notoriously pungent stench" of the large commercial marijuana crop has tainted the grapes he grows and caused a customer to cancel a 6 ton order. New descriptor for terroir.

Interestingly, by filing the suit in Federal Court the plaintiff is claiming it's a violation of the RICO act and that under federal law marijuana is a Schedule 1 drug which is illegal to possess, manufacture, and distribute. First court date is in May.



Drink Responsibly.
Drive Responsibly.

Note: The next regular meeting will be Wednesday, April 17th at 7:00 PM. **Note** that the meeting location again will be held at the Westbrook HOA Club house on 14255 Southwest 6th Street, Beaverton. See the google map below or use your smart phone. Parking is along the street out front. We hope to have a fourth and final meeting site for the May meeting at which time we will vote for the permanent location.

Agenda for April: Barrel / carboy sample tasting of one of your 2018 wines. Bring a bottle if you can afford to lose it or a half bottle (we will take small tastes). Lets see how our wines are coming along.

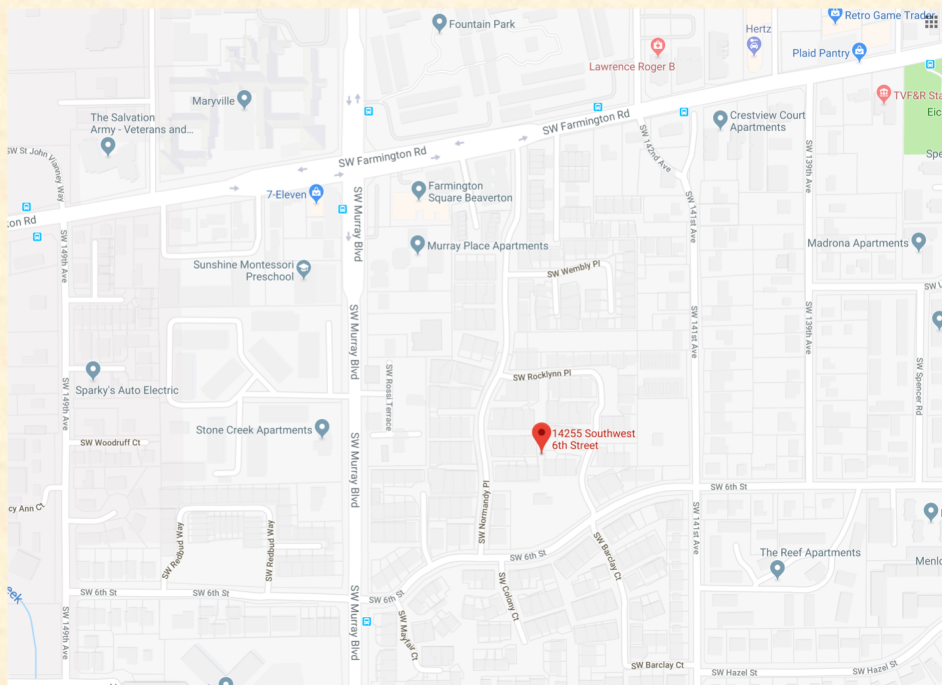
If you haven't already, be sure to renew your club membership and sign a new waiver.

The regular meeting will be a potluck, bring a small snack to share.

The club meeting will begin at 7 pm and end by 9 pm. If you can, get there a little early to help set up. Please help put away chairs and tables at the end of the meeting.

Website: <http://portlandwinemakersclub.com/>

Map & Directions: Take SW 6th Street East off of SW Murray Blvd.



March Meeting Minutes

Present: 23

- First time meeting at the Westbrook HOA club house. The room is large enough for all our meetings, has enough chairs and tables and has kitchen facilities if needed.
- Bill brought up the question: Do we want to insert a November meeting into our schedule? We used to skip November because Marj was always on vacation. After some discussion, it was proposed and seconded. The vote was in favor.
- Jeremiah Deines thought that Heritage Apple Farm out on Scholls Ferry Rd. might have an event / meeting space to rent. He will get more information.
- If we choose to meet at the Westbrook location, the 3rd Wednesday in May is not open.
- The April meeting will be barrel / carboy sample tasting.
- Damon Lopez is still working on a few tour ideas.
- Our speaker for the May meeting will be Jeremiah Deines for a discussion on cider making.
- Bob Hatt says it's a little too early to contact the vineyards for the grape purchase program.
- Mike Smolak discussed the possibility of an annual "Marj Vuylsteke" award to honor a most valuable club member.
- We announced that the PWC now has liability insurance.
- Paul Natale suggested that someone take on the responsibility of being the sponsor of a closed Facebook group page.

Bill introduced John Davidson who is the owner, founder of Walnut City Wineworks located in McMinnville. John uses predominantly organic vineyard practices. He has been making wine in Oregon since 1980 and gained a partner in 1984. He started the Walnut City Winery in about 1999. He now concentrates his own efforts in growing about 200 to 400 acres of grapes for other people. Wädenswil is his favorite Pinot Noir clone. John said it was serendipity to find themselves working shoulder-to-shoulder with the best of modern-day Oregon wine pioneers. They have grown, grafted, and planted more than a million vines in over the last two decades. He brought with him 3 of his older wines for us to taste. A 1905 Pinot Noir which was superb. A magnum of 1999 Pinot Noir that was still tasting well and an older Pinot Gris desert wine that was very good.

Our members asked many questions and his talk went over an hour long. A very interesting speaker.



SHORT NOTES OF INTEREST

- “When I have grapes with integrity, I like to work the grapes on the front-end of a fermentation.” **Lisa Amaroli**, director of winemaking, North Coast, Benziger Family Winery.
- Napa Valley vintner Agustin Huneeus Jr. was among the 30-plus parents charged in March in connection with the national college admissions bribing scandal allegedly participated in the scheme to help one of his daughters enter the University of Southern California.
- Talk about extended maceration – This from Viader Vineyards & Winery, Deer Park, CA “After the hand-harvest, grapes go into a destemmer and then immediately put into tanks for an extremely extended maceration process: anywhere between 60 to 70 days, which includes a three- to four-day cold soak. “My record is 72 days,” said Alan Viader, laughing at his own well-practiced patience but explaining that he feels he gets more depth of character and better quality wines from his grapes with this process.”
- **Consumer Perception of PlantCork Versus Traditional Cork**

In 2013, **Vinventions’ Nomacorc** brand introduced PlantCork, an alternative wine closure made from sugarcane-based polymers. The company claims using sugarcane not only cuts carbon dioxide emission by 90 percent, leaving a -1 carbon footprint, but that the product is also 100 percent taint free: “With a consistent and controlled oxygen ingress, wine is preserved for up to 25 years and guaranteed TCA- and fault free,” according to the company’s marketing materials.



Winemakers Discuss Cap Management Regimens

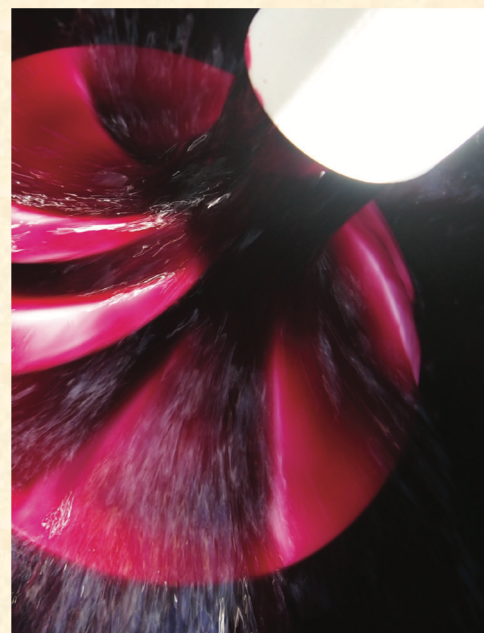
From punch-downs and pump-overs to pulsed air, rotary tanks and more, seven winemakers compare their practices.

Lance Cutler

RED WINE FERMENTATIONS CAN be tricky. There are so many interacting phases. Extraction is key, but it must be controlled. Winemakers look to develop great color while retaining the best fruit characteristics of the varietal. They need to coax out those compounds that lend complexity and mouthfeel, along with enough tannins to give the wine a backbone but not so much that the wine turns astringent or chalky.

CO₂ produced during red wine fermentation pushes the skins to the top of the fermentor, creating a “cap.” Since most of the color, flavor and tannins are found in the skins, one of the winemakers’ most important jobs is managing that cap to provide maximum extraction of the elements needed to produce the precise style of wine they are hoping to achieve.

The more the skins are kept in solution, the better the extraction of polyphenols, which contribute to color, flavor and tannic structure. The cap heats up



more than the juice beneath it. Winemakers need to keep the cap cool and wet and in contact with the juice for proper extraction. Simultaneously, they need to keep the yeast happy enough to complete the fermentation

Traditionally, the two methods of cap management used by winemakers were punch-downs and pump-overs. Newer methods that incorporate pulsed air, submerged cap or rotary tanks are available, but the quintessential goal remains the same. As **UC Davis** professor **Roger Boulton** explained, “The idea is to keep the interface between the cap and the juice as well mixed as possible. That keeps the temperatures the same and allows for a steady, continuous extraction. That gives the winemaker the best chance of making the key decision, which is when to stop skin contact and achieve the best balance of fruit, middle palate and tannic structure to the finished wine.”

If you have been making red wine for any time at all, you are probably familiar with punch-downs and pump-overs. For punch-downs you use some tool (or even your feet) to push the grapes in the cap down into the liquid. This is especially difficult at the beginning of a fermentation, during cold soak, before the grapes have formed a cap above the liquid. Many winemakers are enamored with aqueous extractions before much alcohol is present, feeling that these extractions give deeper color and a softer mouthfeel with gentler tannins, so these difficult punch-downs become a necessary evil, often resulting in sore abdominal muscles for the people assigned to do them.

Pump-overs used to involve hooking a hose up to the racking valve of a tank and pumping the fermenting wine into the cap, like a giant firehose, until it broke up the cap and pushed it down into the liquid. Winemakers realized this method was beating the hell out of the grapes, likely causing harsher tannins to form, so most pump-overs have transformed into gentler, irrigation-type devices in lieu of the firehose.

There are lots of irrigation systems, some even designed in-house by various wineries. One popular device is called The TOAD. It is designed to radially distribute liquid evenly over a tank’s interior. Its advertising claims, “It will not ‘bruise’, will not clog and that its consistent coverage over wine must.

PULSAIR results in better extraction of phenolic, odor and flavor compounds.” It can be used in-line or hooked up with clamps. When used in conjunction with a venturi system, it can also provide much needed oxygen to the fermentation, which helps keep the yeast happy and active.

Lisa Amaroli is director of winemaking, North Coast for **Benziger Family Winery**. “When I have grapes with integrity, I like to work the grapes on the front-end of a fermentation. If I do a four-day cold soak and I can keep the berries in contact with the juice, I can extract softer tannins with plenty of color.”

One problem Amaroli recognized was that punch-downs and pump overs, especially in the beginning, tended to smash grapes and tear the skins. She was looking for a better, gentler way to keep the berries in contact with the juice throughout cold soaks and during the beginning of active fermentation. They had been using The TOAD with pumps and a venturi to keep the cap soaked up and oxygenated. Working with winemaker **Terry Nolan** in the 1990s, Amaroli developed a tool called the “Festivus for the Rest of Us.” They wanted to lessen harsh tannic extraction from skins and green seeds during fermentation, but keep things moving and oxygenated for the benefit of the yeast.

The Festivus was a stainless-steel pipe that they could push through the cap and into the fermenting juice. They would push it deep enough so that the compressed air entering the juice would mix the wine under the cap, keeping the cap moist and feeding the yeast.



“Our goal was to achieve uniform, even coverage, using gentle splashing and no splatter. We wanted something that was adjustable for flow and tank size, and it had to handle whole berries without clogging.”

Evan Schneider, *Vintuitive Winemaking Tools*

Evan Schneider is a mechanical engineer with degrees from both **MIT** and **Stanford**. He became friends with **Alex Mitchell**, the owner of **York Machine Works**. They partnered to form **Vintuitive Winemaking Tools LLC**. Their LOTUS pump-over head was designed to gently and uniformly distribute juice—even if that juice is unfiltered or mixed with berries—over the caps of any sized tank.

“Our goal was to achieve uniform, even coverage, using gentle splashing and no splatter. We wanted something that was adjustable for flow and tank size, and it had to handle whole berries without clogging,” Schneider said. Schneider’s experience with 3D printing allowed him to make design changes, print out models and then test them with water to check how well they were working. The unit hooks up to standard Tri-clover fittings and occupies a small head space that allows winemakers to fill up their tanks more than other pump-over set-ups. The unit is continuously adjustable, has few moving parts and is easy to install and clean.

Automating the Pump-over

No matter how you go about your punch-downs or pump-overs, they take time. Depending on the stage of your fermentation, these operations are performed two to three times daily. During harvest, when dozens of tanks are fermenting simultaneously, wineries often employ a couple of people to do nothing more than perform these operations all day. That type of labor requirement is expensive and time-consuming, so many wineries are automating their systems.

Matt Crafton, winemaker for **Chateau Montelena**, had worked with Alex Mitchell. When introduced to the LOTUS, he was fascinated. “They were thinking outside the box to create and innovate. They had terrific design pedigrees, worked with state-of-the-art 3D printing, and the model was fluid and dynamic. I like to support that type of creativity.” Crafton outfitted the entire cellar at Montelena, purchasing 30 dedicated devices. Mitchell and Schneider customized each LOTUS to work in each individual tank based on size and configuration. Crafton put in a dedicated automation system. Each tank had its own pump with a **TankNet** controller, which allowed the winemaker to program frequency and duration of the pump-over based on temperature, time or other factors. The pump was hard-lined to the LOTUS, which distributed the juice on top gently, with thorough coverage.

“LOTUS is the perfect blend of theory and application. It’s unique and does one thing extremely well. It is reliable and easy to clean,” Crafton said.

Back in the day, winemakers used to control tank temperatures during fermentation manually. Every few hours you’d take a sample from the tank, check the temperature and then open or close a valve connecting that tank to your cooling system. It took a lot of time, was not terribly accurate and made a full night’s sleep almost impossible. As time went on, winemakers were able to install tank-mounted thermostats, which electronically opened or closed those valves and better regulated tank temperatures.

These days, if you want to automate your cap management system, then you need some type of controller. There are several companies that produce tank controllers for wineries. **Paul Egidio** is president of **Acrolon TankNet**. They can provide tank-mounted or custom Programmable Logic Controllers. These controllers not only regulate tank temperatures, but they can give web based access, with remote alarming if something goes wrong.

The device can turn pumps on or off and modulate speed. It logs data, such as Brix, temperature, and when valves are

opening or closing, and comes with software that can tie into other systems. There are real time monitors and relays for pump over, micro ox, controlling spray patterns, timing and duration.

Egidio said, “Increasingly, TankNet customers, from boutique and super-premium wineries all the way to **E&J Gallo** are adding pump over automation to their temperature control systems. (It’s a trend that’s been accelerating over the past several years.) We can pretty much provide anything that a winemaker might dream about, but our flagship fermentation controller places the necessary VFD and venturi control points right there at the tank. Wireless communication to TankNet software puts winemaking teams large and small in complete control of their craft from



virtually anywhere.”

Winemakers Turn to Pulsair for Tannin Management

Nick Goldschmidt is the owner/winemaker of **Goldschmidt Vineyards**. Before that he was executive winemaker for **Allied Domecq Wines (Clos du Bois, William Hill, Mumm Napa, Buena Vista, Atlas Peak, Callaway and Haywood)**. He’s worked in California, Spain, Argentina, New Zealand and Portugal and oversees production of 2.5 million gallons in the U.S., alone.

Goldschmidt focuses on cap management because it allows him to dial in the style of a wine so that it matches the vineyard. When he has a vineyard that provides fruity, less tannic fruit, he may ferment hotter, trying to maximize tannin extraction to balance that fruitiness. Conversely, a vineyard with tannic fruit might be fermented at cooler temperatures to preserve fruit character and slow tannin extraction. Manipulating the cap more or less aggressively also contributes to that same “dialing in” process.

Goldschmidt has experience with many different cap management systems. He likes rotary tanks but says they are tricky. You can’t rotate too often, or you will over-extract the fruit. He has used **Pulsair** a lot. “I really like the Pulsair system. It is a very gentle and effective way to break up the cap and circulate the juice, especially at the beginning of a fermentation. Just three or four pulses do the job.” Once the wine is fermenting, Goldschmidt switches to traditional punch-downs, fearing that the Pulsair might mix things too well, extracting unwanted tannins.

Charlie Parks, director of marketing for **Pulsair**, described it as “a system of cap management that sequentially injects large, compressed air or gas bubbles underneath the cap. The rising air bubbles push the juice into and over the top of the cap, which separates the cap, freeing the individual berries. Some winemakers call it a ‘reverse punch-down.’” He described the system as labor efficient and much faster than regular pump-overs. It releases trapped CO₂, heat and reductive aromas.

Pulsair can operate through moveable open top probes for small tanks and fermenters. It can also operate through a ball valve/racking port at the ground level of a tank. For larger tanks multiple air injection ports, through the sidewall or up through the bottom, are available. Pulsair offers fully automated, multi-tank network controllers or mixers for individual tanks. They also offer on site start-ups and training.

Josh Maloney consults for five different wineries and operates **Maloney Wine Company**. He has used Pulsair as a single unit through a valve, as well as multiple ports in tank bottoms. “This Pulsair technology is the most important tool for tannin management in decades,” he stated. “Used properly, it effectively breaks up the cap and homogenizes the fermenting tank. I like to use the Pulsair early in a fermentation, less in the middle and then again at the end. I find that type of usage front-loads the palate with fruit and still provides a long finish.”

Maloney said that Pulsair can be an effective tool with a great impact on wine in all price ranges. In wines selling under \$20 a bottle where consumers may not expect structure and length on the finish, using Pulsair early works perfectly to shape tannins and soften mouthfeel, he said. The process redistributes heat rapidly, which leads to faster extraction, especially in larger tanks. For large wineries trying to push fermentations, this can lead to better efficiency.

“Pulsair can be a very effective tool for winemakers, but you have to be careful, taking into account the varietal, vineyard and tank size.” He cautioned. “If you are not paying attention, you can over-extract tannins and put your wine out of balance.”

Richie Allen, director of viticulture and winemaking at **Rombauer Vineyards**, uses LOTUS *and* Pulsair for his red wine fermentations. He especially likes LOTUS in his smaller tanks (those less than 7 tons) because the device is light, easy to move and provides great coverage. In the beginning he would move the LOTUS from tank to tank, but he has now gone fully automated. Each tank has its own centrifugal pump. A screen in the tank allows the wine to travel up a pipe, past a venturi and to the LOTUS. The system is run by TankNet. It allows Allen to set time, duration, frequency, pump speed and volume for each tank.

In addition to using the LOTUS, he will use Pulsair twice, during each fermentation, as well. He has a moveable system that he moves to his various open topped fermenters. He will give a couple of pulses to completely break up the cap. “It’s sort of like délestage for cheaters,” chuckled Allen. When asked if he ever worries about getting too much phenolic extraction using both systems, he explained they use **WineXRay** for rapid, real time phenolic analysis on a daily basis.

“Not running phenolics and knowing how to use that information is just wasting your owner’s money,” Allen volunteered. “If you are a winemaker and don’t know this, you need to go back to school.”

To Cap it Off

Cap management for red wine fermentations is critical for determining style in a finished wine. How a winemaker works those grapes in the fermentor has a great effect on color, midpalate mouthfeel and finish. Strides have been made in the type of equipment available to winemakers to manipulate the cap. Two general trends have emerged: first winemakers have chosen to use equipment that is gentle in its mixing of the cap, and second, they are moving more and more into automation.

Deciding which technologies to use for cap management remains a personal decision for winemakers. Traditional pump-overs, punch-downs and délestage are proven techniques that have worked well for winemakers for many years. New equipment and methodologies are available that give winemakers more control in manipulating caps and extracting phenolics. Recently winemakers have gained the ability to analyze phenolic data almost instantly to inform their decisions regarding extraction and length of time on the skins.

Automation has become more sophisticated. Tanks can be outfitted with controllers, dedicated pumps, ventures and irrigation devices. Winemakers can set flow rates, length of pump overs, timing frequency and then send information regarding Brix and temperature to a software program on their phones. During the frantic weeks of harvest, automation can lessen labor costs and relieve some winemaker anxiety.

Clearly, automation is becoming more prevalent in modern winemaking. The ease and security of automated systems that help with cap management are seductive. Before winemakers jump all in, they might want to heed the words of Nick Goldschmidt, who has first hand knowledge at wineries all over the world, both big and small. “Automation can be difficult for maintaining quality. I think winemakers need to visit their tanks at least twice a day to taste and monitor fermentations. After all, tasting is our job.”



Decanting Wine: The Science, The Myth and The Realty



Recently a wine club member called to reorder a case, an Italian Barbera from the Artisan Series. He asked if many people had reordered the wine, and I answered no. He said that he wasn’t surprised. He and his wife had sat down to dinner and were unimpressed by the wine. A telephone call interrupted their meal for a half hour, and when they returned to the table and their glasses, they were astounded by the wine’s transformation. The Barbera, which at first was banal, was now brimming with berry flavors and aromas and had a silky texture. What could possibly have happened during the half hour that the wine sat in the glass?

The simple answer is that the wine was allowed to “breathe.” Exposed to air for that half hour, it was able to release its flavors and aromas. The formal method for bringing about this transformation is to decant the wine before serving, transferring it from its original bottle into a decanter, although the process is not without controversy.

The undisputed advantage of decanting pertains to older wines that over time have thrown sediment in the bottle. Carefully transferring the wine to another container while the sediment remains in the original bottle separates the

unpleasant sediment from the wine. Another undisputed aspect of decanting wine, whether old or young, is simply that a beautiful decanter made with clear glass is an esthetic pleasure that enhances both the wine and the table. The controversy centers around whether or not decanting wine and thus aerating it as it transfers from one container to another really benefits the taste, supposedly releasing aromas and fruit flavors and softening tannins through oxidation and evaporation. Most people in and out of the trade think it does although the science, at least what exists, says not or not exactly.

When winemakers taste professionally, they swirl wine in a glass and sniff it first before sipping, because we perceive only sweet, sour, bitter, and salt with the taste buds on our tongues and every other flavor with the nerves in our noses. Swirling the wine sets its molecules in motion so that aromas can be more easily inhaled and then identified by our brains. Likewise, decanting a wine will set molecules in motion as does swirling it in a glass although some argue that exposing the wine to air over a prolonged period will dissipate delicate aromas, especially those of older wines.

While aerating wine for at least a short period can noticeably improve flavor, making it smoother is debatable. The primary reason that winemakers age red wine in barrels is that wood is slightly porous and allows the wine to undergo a carefully controlled oxidation over many months. Oxygen promotes the polymerization of tannins, which links shorter molecules into chains that feel smoother on the tongue. In older wines, these chains will become heavy enough to actually fall out of solution and create sediment in the bottle. But the process occurs over many months or years, not within the hour that wine might be exposed to oxygen in a glass or a decanter.

But what can happen within an hour is that preservative sulfur compounds, added during the winemaking process, can evaporate. Yeasty components and carbon dioxide in white wine can also dissipate. Without these extraneous elements, intrinsic fruit flavors become more apparent. Red wine will also more quickly reach room temperature after decanting and feel smoother in the mouth than at lower temperatures.

So if you are not in the habit of decanting wine, should you start? I say yes, at least when you have the time and want to enjoy a given wine at its very best and especially if you think a wine is not as good as it should be.



What is Mega Purple?

MegaPurple is a grape juice concentrate that, when used in tiny amounts, can effectively add color to a wine. Use too much, and winemakers risk ruining the wine. (Photo by Andy Perdue/Great Northwest Wine)

The next time you pick up a glass of inexpensive red wine, you might look at its color. Is it a little too dark? When you swirl it, does some purple legs remain on the glass?

It could be the natural color of the wine. Or it could be something a little more artificial.

A widely used product in the American wine industry is called Mega Purple. It's a product made by Constellation – the world's second-largest wine producer – and it is made by concentrating the juice from a variety called Rubired, using grapes grown primarily in California's Central Valley.

It's been around since the early 1970s, and the whole point was to turn a pale-colored red wine darker. In the consumer's mind, darker means richer and more likely to be purchased and consumed.

But to several wine experts, products such as Mega Purple are an insidious additive that can mute the aromas and even

change the flavors of wine.

We recently chatted with Ellen Landis, a certified wine educator and accomplished wine professional who recently relocated from California to the Pacific Northwest. She is one of the leading experts on Mega Purple and recently conducted an educational seminar on Mega Purple for a group of Northwest wine professionals.

As mentioned, it is a concentrate whose original use was as a color additive.

“Often, consumers think that a pale wine isn’t great, isn’t complex, doesn’t have enough definition, so it was introduced to add color to wine,” Landis told Great Northwest Wine. “That was the original intent.”

Landis conducts seminars in which she will doctor a wine with 0.1 percent Mega Purple and 0.2 percent. The differences are stark. She’ll take a large glass of water and add one or two drops of Mega Purple, turning the color of the water purplish black. It’s stark, and it’s astonishing.

“I can see it, I can smell it, I can detect when the aromatic varietal characteristic is muted, and it’s so obvious to me,” she said. “But I know with wines under \$15 a bottle, it might be beneficial because you will add color – and you will add a hint of sweetness, which many consumers like. But it sells, so I think it depends on the use and the degree it is added. This is a very sweet product. It’s reported around 68 degrees (percent residual sweetness). That’s sweet.”

It’s also expensive, selling for around \$200 per gallon. But a gallon can add color to a lot of wine – thousands and thousands of bottles.

Landis said that, by far, she notices Mega Purple the most in inexpensive California Pinot Noirs, but she’s also seen it in plenty of Merlot and Cabernet Sauvignon.

“It’s overused,” she said wearily.

Some winemakers who use Mega Purple will add it during fermentation, while others will use it later in the winemaking process. This, she says, can determine how well integrated Mega Purple is in the finished product.

Who uses MegaPurple?

Considering how much Mega Purple is out there – reportedly, 10,000 gallons are sold per year – almost nobody admits to using it. In fact, Landis can’t get any winemakers to talk about their use of Mega Purple.

“There are very few who will admit to using it, even though it’s widely used,” she said. “I do understand the value of adding a bit of color. I believe if you use it in a very low degree, it will not take away from the wine.”

For Landis, her threshold is 0.1 percent.

Of course, Mega Purple is just one of dozens of tools a winemaker has at their disposal. Oak, tartaric acidity, tannins, yeast strains. All of these would be considered additives. But Mega Purple goes well beyond a simple tool because it can change the character of the wine.

Landis loves living in the Northwest, primarily because of the clarity and purity of the wines made in this corner of the world. More often than not, a little Mega Purple can ruin that for her.

“I think many (winemakers) look at the grape concentrates as their magic potion,” she said. “Voila! This wine is now beautiful! For the bulk of average consumers, it’s not recognizable. It’s a fruity, dense, darkly hued wine. There’s something about making a wine that consumers love, and I’m all for that.”

In fact, she believes that the vast majority of wines that sell for \$15 or less per bottle probably will have a grape concentrate added to it.

What makes Landis sad is there’s another more natural solution: blending. Adding a little Malbec or Petite Sirah to a wine will add color in a hurry. In fact, one of the primary purposes of blending in, say, Bordeaux, is to fill in the “holes” in a Cabernet Sauvignon. Malbec might add color or acidity, Petit Verdot might add tannin, Merlot might smooth out the wine, and Cabernet Franc might reduce tannins and add complexity.

Landis said blending can fix a wine’s issue without removing its clarity and purity. Mega Purple can go beyond that. “It can be very manipulative when overused, and it is often overused,” Landis said. “I am seeing a bit of Mega Purple being used here (in the Northwest). For my palate, if used in too high of a degree, it will mute the aromas, it will downsize the varietal characteristics.”



When And Where Fruit Flies First Bugged Humans

Nell Greenfield Boyce



Drosophila melanogaster, the common fruit fly, is a mainstay of genetics and biology labs.

The next time you swat a fruit fly in your kitchen, take heart from the fact that people have apparently been struggling with these fly infestations for around 10,000 years.

A study published Thursday suggests *Drosophila melanogaster* first shacked up with humans when the insects flew into the elaborately painted caves of ancient people living in southern Africa. That's according to a report published Thursday in the journal *Current Biology*.

Scientists say the flies would have been following the alluring smell of stored marula fruit, which were collected and stored by cave-dwelling people in Africa. This tasty yellow fruit was a staple in the region in those days — and was also the fruit that wild flies apparently evolved to depend on in nearby forests.

The humble fruit fly now lives with humans all over the planet and is one of the world's most studied creatures. For more than a century, biology and medical laboratories have depended on this fly — one scientist notes that at least nine times, the Nobel Prize in Physiology or Medicine has been awarded for research on *Drosophila*. One of those prizes was won by Thomas Hunt Morgan of Columbia University, whose fly research in the early 1900s plucked this species from obscurity and transformed it into a mainstay of genetics.

"It's small; it's cheap to raise; it has interesting genetics," explains Thomas Kaufman, a biologist at Indiana University in Bloomington. "We think that flies are quite charismatic. They're wonderful. They're beautiful little animals, and we love them. Seriously."

But despite all that love and study, the origins of this fly, and how it first moved in with people, have been a mystery.

"I've been wondering about this for the past 20 years," says Marcus Stensmyr, a biologist at Lund University in Sweden who uses these flies to study the olfactory system. "It's really been kind of a life-long ambition, if you wish, to find where they come from."

Scientists have known for decades that, like people, the flies seem to have started out in Africa — somewhere. "You find them in your kitchen. You find them in my kitchen — you find them in everyone's kitchen," says Stensmyr. "But if you go out into the forest, you simply don't find them."

Recently, researchers collected flies from around Africa and looked at their genes. They found that the greatest genetic diversity was found in flies from Zambia and Zimbabwe, suggesting that this species got its start in the southern-central region of the continent. But trips to that region failed to turn up much of anything.

"After a number of failed excursions down to Africa," says Stensmyr, "we thought, 'OK, so maybe they are associated with some specific fruit in their original home.' "

Stensmyr and his colleagues studied a long list of possible fruits, looking for all the features that *D. melanogaster* is known to prefer. The flies favor citrus fruits — like oranges, for example.

"We came to a candidate fruit — that was marula fruit," says Stensmyr. The yellow fruit is about the size of a large plum, with a hard stone in the middle. "It has a sweet and nice taste."

The researchers traveled to the woodlands of the Matobo National Park in Zimbabwe. They found fruiting marula trees and put out traps. Bingo — they caught *D. melanogaster*.

"We found tons of flies," Stensmyr recalls.

Further study showed that wild *D. melanogaster* strongly prefer marula fruit over oranges.

What's more, so does a breed of fly that's commonly used in labs. This strain was established in 1916 from a fly population in Canton, Ohio.

"They actually have retained the preference for marula," says

Stensmyr. "They would go for the marula as well."

The researchers isolated one particular chemical in this fruit — ethyl isovalerate — that seemed particularly important. Flies that were given a choice between marula and oranges spiked with this chemical failed to pick one over the other, suggesting that the two choices seemed the same to the flies.

All of this provides an intriguing clue for how these insects may have started to make their home with people. Near where the researchers found the wild flies, there are caves where the San tribes once lived. These people left behind beautiful cave paintings — as well as the pits of marula fruit that they had eaten. From one cave alone, excavators turned up 24 million marula stones.

"They really, really loved marula," says Stensmyr, who points out that the stones found date from about 12,000 years ago to about 8,000 years ago. "During the times when these caves were inhabited, the San people must have brought enormous quantities of marula into the caves."

That means marula was likely stored there, and available there long after the marula in the forest had been eaten up by wildlife. The strong smell of all this marula would have attracted the flies.

To test whether or not wild flies would actually enter a cave, the research team put traps baited with fermenting marula along the far wall of the Nswatugi cave. Sure enough, over a period of a few days, these traps caught a number of *D. melanogaster* flies. The study, and the story it tells, has completely delighted other scientists who study fruit flies.

"I particularly liked going and catching the flies in the painted caves," says Kaufman. "That was inspired. It's really a neat paper."

"I thought it was fantastic," agrees Celeste Berg, a developmental geneticist at the University of Washington, Seattle who has used flies in her research for 30 years. "I thought their data was really quite striking."

Berg says she wonders exactly how the flies would have spread from these caves to the rest of the world.

"I think it's exciting to learn the origins of fruit flies and, even if you're not an ecologist or a population geneticist, I think it's just natural to be interested in the history of the organism you study," says Berg. "I had assumed that fruit flies liked all kinds of fruit — especially bananas. I didn't even realize that they preferred citrus. And it's not even really citrus that they prefer; they prefer this particular marula plant, which I also had never heard of."

Debbie Andrew, a developmental biologist at the Johns Hopkins School of Medicine who has worked with fruit flies for four decades, also says she loved the paper.

"They built a good story," says Andrew. "It's very hard to prove something that happened 10,000 years ago or more. I like the story."



The marula fruit seems to hold a special power over *D. melanogaster*, which prefers it above all others.

As to whether all the details are right, she says, "I don't know; it does seem plausible, based on the amount of marula fruit stones they found in the cave."

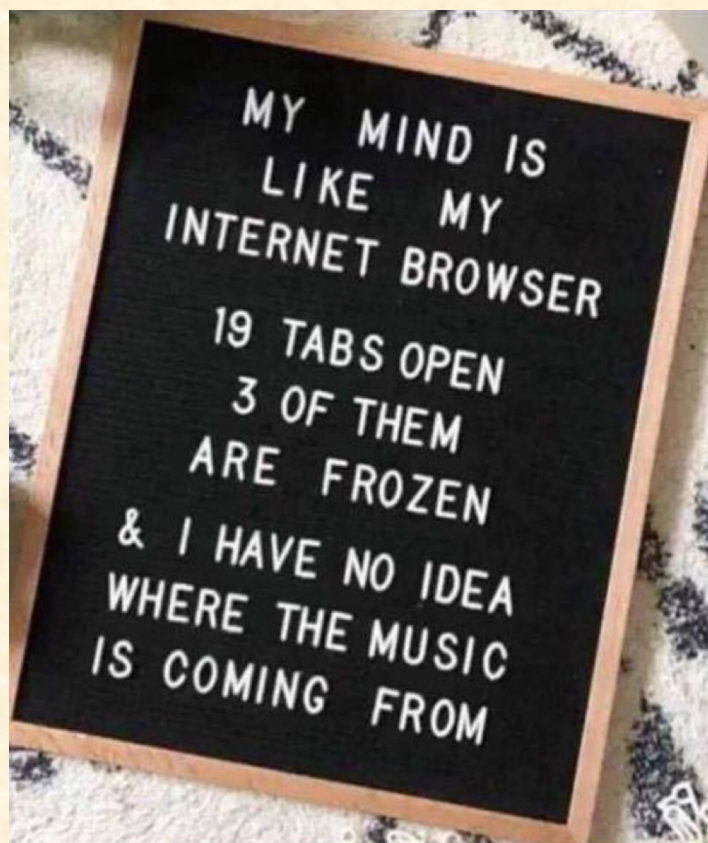
Based on this paper, says Andrew, the old saying, "time flies like an arrow, and fruit flies like a banana," should really be changed.

"Time flies like an arrow," she says, "and fruit flies like an orange, or a marula fruit, or perhaps an orange spiked with ethyl isovalerate."



I don't want to brag or make anyone jealous or anything, but I can still fit into the socks I wore in high school

*My memory's not as sharp as it used to be.
Also, my memory's not as sharp as it used to be.*



Portland Winemakers Club

Leadership Team – 2019

President: **Bill Brown** bbgoldieguy@gmail.com

- Establish leadership team
- Assure that objectives for the year are met
- Set up agenda and run meetings

Treasurer: **Barb Thomson** bt.grapevine@frontier.com

- Collect dues and fees, update membership list with secretary
- Pay bills

Secretary: **Ken Stinger** kbstinger@frontier.com

- Communicate regularly about club activities and issues
- Monthly newsletter
- Keep updated list of members, name tags and other data

Chair of Education/Speakers: **Barb Stinger** kbstinger@frontier.com

- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Paul Sowray & Barb Stinger** davids1898@aol.com

- Conduct club tastings kbstinger@frontier.com
- Review and improve club tasting procedures

Chair of Winery/Vineyard Tours: **Damon Lopez**. dlopez5011@yahoo.com

- Select wineries, vineyards etc. to visit
- Arrange tours
- Cover logistics (food and money)

Chair of Group Purchases: **Bob Hatt** bobhatt2000@yahoo.com

- Makes the arrangements to purchase, collect, and distribute
- Grape purchases
- Supplies – These should be passed to the President for distribution

Chair of Competitions: **Paul Boyechko** labmanpaul@hotmail.com

- Encourage club participation in all amateur competitions available. Make information known through Newsletter, e-mail and Facebook.

Chairs for Social Events : **Marilyn Brown & Mindy Bush** brown.marilynjean@gmail.com

* Gala / Picnic / parties mindybush@hotmail.com

Web Design Editor: **Alice Bonham** alice@alicedesigns.org