Lindsay's Vineyard Chronicles

What's been going on in the vineyard this week?

Thursday June 22

Whilst the month of June continues to bring more clouds and rain than I would like, life inches forward and we're seeing a whole lot of new action in the vines right now.

Figure 1: Snapping turtle ambling into the north block last week

Figure 2: flowering Frontenac (blanc)

The big news this week – we're officially seeing flowers in all blocks! Not surprisingly, bloom is happening a little later than we would expect in a normal season. This year's freeze followed by cool, wet weather has us set back about two weeks from our typical schedule.

The winner in the race-to-flower was Frontenac Blanc, in the north block. I spotted the first open flowers in the very first row closest to the restaurant, go take a peak when you're passing through!

The process of bloom across a cluster can take several days, sometimes more. Within a single

vine, it'll take nearly two weeks for all the clusters to flower. Bloom is officially called once we reach around 75% of the flowers open on the clusters across a variety. That date usually ends up being more of a 'guesstimate', as things can change so rapidly at this point in the season. We're a ways away from Bloom (capital B) at the moment, but I expect next week I'll be starting to collect our petiole samples for lab analysis (expect that discussion next week!).

Why are grape flowers so weird?

They look weird, they have no petals, they're green? Yes - grape flowers are **so** weird. But, who cares, because they'll turn into grapes eventually. One of the big misconceptions I hear about vines happens really early in the season when people see the 'baby grapes' appear on new shoot growth. Yes, those tiny clusters will be grapes eventually, but let's not rush through life. We must cherish the flowers before we can enjoy the berries!

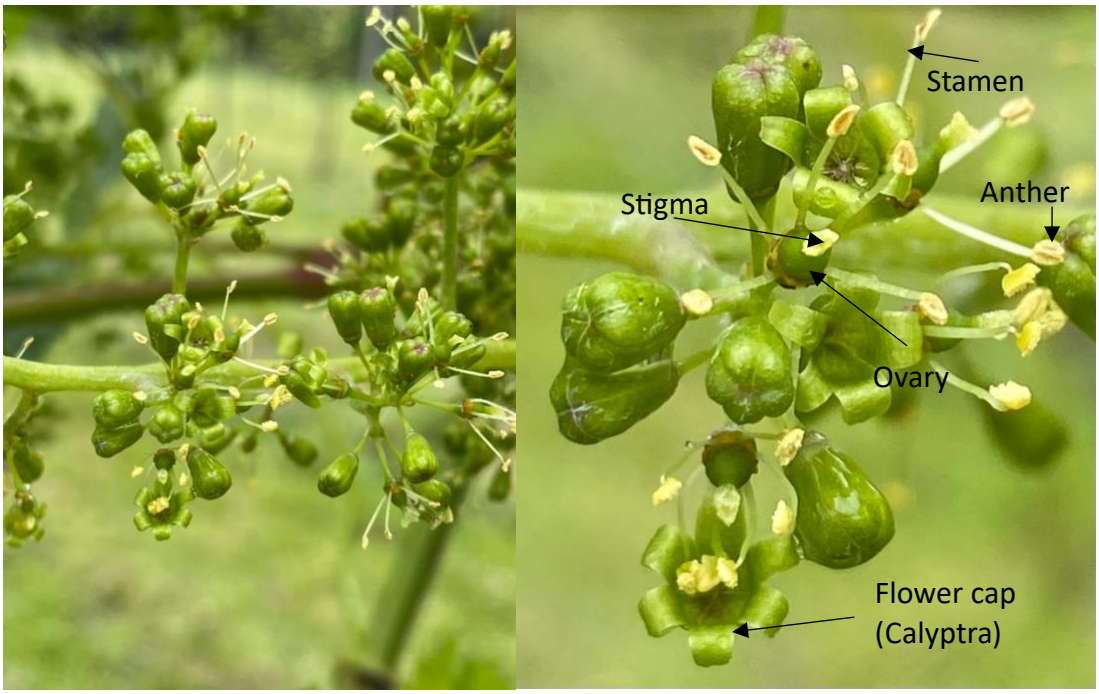

Figure 3: up close and personal with a flowering cluster

Interesting facts about grape flowers:

They're hermaphroditic – you may have heard that in most fruiting plants, there are male and female flowers. Female flowers need to be 'fertilized' with the pollen from the male flowers before fruit (or veg) can form. Most cultivated varieties of grapevines are hermaphrodites, meaning their flowers contain both the male and female organs. The 'petals' of the grape flower are in fact the stamen, which is the male organ that contains pollen within the anthers (those white nodules at the end of the filament).

Their petals are shaped like a tiny hat – my favorite grapevine term is hands down *'Calyptra',* which is the name for the petals, or flower cap, on the cluster. These little green buds are what people often see and think must be small grapes. In fact, when the vine is ready to bloom, the petals detach from their base as the stamen inside the flower begin to open up. In time, the stamen forces the flower cap up and off the top of the flower. If you spend a lot of time looking at flower clusters, like me, you can find these tiny caps stuck in clusters, on leaves, and scattered among the grass, and they are adorable!

Figure 4: new word of the day, Calyptra (tiny petal caps from grape flowers)

They are usually pollinated even before the flower caps fall off – before bloom, the stamen are folded up in the cap, precariously close to the stigma (or the opening to the ovary, the female organ that eventually becomes the grape berry). The stigma is usually ready to start taking in pollen before the stamen have opened, which means those tiny grape ovaries are usually pollinated well before we see bloom. For grapevine cultivation, it just means we worry a little less about that part of fruit set (meaning, fruit set due to pollination – there are several other reasons clusters might not set fruit, and we always need to be vigilant for those!).

PS: this is one of many reasons why grape breeders are revered in the grape and wine industries – in order to successfully crossbreed a new variety, breeders must catch the cluster at exactly the right moment, open the calyptra without damaging the organs inside, emasculate (remove the stamen from) hundreds of tiny flowers, dust the exposed stigmas with pollen from another variety, and then wait for a several months in hope that those berries make it through the season so they can recuperate their mature seeds. Yikes!