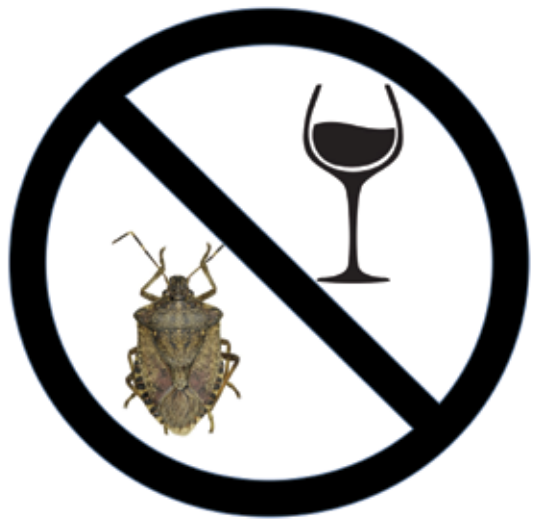
Notes from a Rogue entomologist

Days of wine and stink bugs

BY RICHARD J. HILTON



Some of you may recall a time when there were such things as books of jokes. A joke book I had as a youngster was titled *Waiter! There's a Fly in My Soup!* It included many variants, such as "Waiter, what is this fly doing in my soup?" "I believe that's the backstroke, sir." Or "Waiter, there's a dead fly in my soup." "Yes sir, it's the heat that kills them." And my favorite, "Waiter, there's a fly in my soup." "Sir, please keep your voice down or everyone will want one." Simpler times, I believe.

Well, a fly in your soup is one thing, but a stink bug in your wine is quite another. In recent columns I discussed a couple of local trends. First is the burgeoning vineyard and wine industry that has rapidly developed into a regional agricultural mainstay and is becoming known for producing premium wines. A less positive trend is the influx of invasive species.

One pest that I have written about is the brown marmorated stink bug (BMSB), which was first discovered in the Rogue Valley in 2012 and can now be readily found in most of the cities and towns in our region. It has not yet become an agricultural pest, but it is only a matter of time. In places where BMSB has been a resident for a longer period, the pattern is for the population to slowly build up in urban and residential areas and then become a pest in the surrounding agricultural landscape. This happened back east when BMSB caused tremendous damage to apple and peach crops in 2010. In Portland, where BMSB was initially found in 2004, BMSB populations are very high, and the pest has begun to show up in Willamette Valley vineyards, where some of the highest quality pinot noir grapes are grown.

Research into the possible deleterious effect of BMSB infestation in wine grapes started back east at the University of Maryland (yes, even Maryland has a wine industry). Further research has been conducted at Oregon State University (OSU) by Dr. Elizabeth Tomasino and others when BMSB started to show up in Willamette Valley vineyards. This research found that the presence of stink bugs in the harvested grapes could taint the wine and identified the specific chemical compounds given off by the stink bug that produced the taint. The number of stink bugs needed to cause the taint is a subject of ongoing research. The work at OSU showed that the destemming and pressing stages were important in the release of the stink bug's defensive (and distinctive) chemicals and that even the type of press used could affect the amount of taint compounds released. The good news is that it appears the number of stink bugs needed to actually taint the final product is quite high, since the taint compounds dissipate over time as they break down during fermentation. As an aside, there is no doubt in my mind that the discovery of fermentation for the production of food (cheese) and drink (wine, beer) was a major milestone in human history.

The aspect of the research on stink bug taint that I found most interesting was that the perception of these taint chemicals was far from uniform. The descriptors most often used to describe the stink bug taint were "cilantro," "skunky," "citrusy," and "piney." While most tasters found the taint undesirable—with a significant number finding it quite loathsome—that response was not universal. I had the opportunity to sample some wine spiked with the taint chemicals at both low and very high levels. I fell into a small group that was unable to perceive the taint at all. The server graciously told me that I was one of the "lucky" ones, but I felt anything but lucky. (However, this may explain my love of "bitter" IPA beer—and the more IBUs the better.)

While a potential career as a wine taster may no longer be an option for me, I will continue to study BMSB and its pest status in vineyards with the goal of developing management options so that the tasting public will never need to find out if they are "lucky" or "unlucky."

Richard J. Hilton
541-772-5165 ext. 227
Senior Faculty Research Assistant / Entomologist
Oregon State University-Southern Oregon Research & Extension Center
richardhilton@oregonstate.edu

Aerial detection survey of Oregon forests is under way

BY BILL SCHAUPP

Results of the 2016 aerial survey by the US Forest Service will be published in the winter issue of the Applegater. *Photo provided by the US Forest Service.*

The 2016 aerial detection survey of Oregon's forests is well under way. This survey is an annual cooperative effort by the USDA-Forest Service's Forest Health Protection group and the Oregon Department of Forestry.

A new feature this year provides brief, timely updates on significant observations. The 2016 update for southwest Oregon is posted on the Internet at arcg.is/29sf1rr. This update features Douglas-fir mortality caused by the flatheaded fir borer and includes airborne video filmed above Ferris Gulch and Thompson Creek in the Applegate watershed between the towns of Applegate and Provolt.

Aerial detection surveys have been flown annually since 1947. Data from these surveys are available online in digital, GIS-ready format, along with prepared maps and much more, at our aerial survey web pages at fs.usda.gov/detail/r6/forest-grasslandhealth/insects-diseases/?cid=stelprdb5286951. (If you don't want to enter the entire web address, here's a step-by-step guide: Go to fs.usda.gov/r6, then click on "Forest and Grassland Health" in the left-side column, then "ADS Home" in the right-side column for Aerial Detection Surveys, then "View the ADS review map."). Each year, very soon after the data are acquired, they are posted to that site.

Because it is too soon to analyze these draft data, I will submit a more detailed assessment of the 2016 aerial survey results over the Applegate watershed for the Winter *Applegater,* which will follow up on the Spring *Applegater* article by Ellen Michaels Goheen and me covering the same topic of forest health.

Bill Schaupp • bschaupp@fs.fed.us
Entomologist
US Forest Service
Pacific Northwest Region
Forest Health Protection

Have you seen the Gater's ONLINE CALENDAR?

Check it out at applegater.org.

Send your events to gater@applegater.org—we'll post them on our Facebook page too!