

Geology & Wine – The Science of Good Taste

This presentation is about the physical environment that underlies and shapes the character and quality of great wine. The French have a word for this - terroir. This is illustrated by the rather simple occurrence of two vineyards, side by side, that share most obvious aspects of climate, slope and viticulture, yet produce wines that are vastly different. Examples abound, but perhaps the most spectacular are the vineyards of Burgundy, France where the Grand Cru white wines of Puligny-Montrachet and the red wines of Romanée-Conti have been highly valued for centuries, some bottles selling for thousands of dollars, whereas nearby vineyards produce only vin ordinaire wine selling for less than a dollar a bottle. The simple question is, "Why?" This presentation will address that question using the vineyards and geology of California, Washington, and France.

Larry Meinert

Larry Meinert's interest in wine dates from growing up in an Ohio household where his father imported fine wine from Germany. He first became interested in the California wine country during his doctoral geological studies at Stanford University. Perhaps it is coincidence that his PhD advisor was not only a respected geologist but also owned part of the family winery in the famous Barolo area of northern Italy. After Stanford, he joined the faculty at Washington State University and in addition to teaching geology for >20 years, operated a small home winery, specializing in a barrel-fermented Bordeaux blend of Cabernet Sauvignon, Carmenere, and Malbec. He joined the USGS in 2012 as head of the Mineral Resources Program. He has published research on the physical factors (terroir) affecting vineyard siting and performance in several appellations of the U.S. and also Argentina, Chile, Italy, New Zealand, and South Africa. For the academically inclined selected readings include:

Apcarian, A., Echenique, M.C., Pavese, J., Jurio, E., Aruani, C., and Meinert, L., 2007, San Patricio del Chañar y Añelo: nueva área vitícola en la provincia de Neuquén, Patagonia Argentina: 11th Congreso Latinoamericano de viticulture y enologia, Mendoza, Argentina, p.1.

Macqueen, R.W., and Meinert, L.D., (eds.), 2006, Fine Wine and Terroir – The Geoscience Perspective: Geoscience Canada Reprint Series Number 9, Geological Association of Canada, St. John's, Newfoundland, 247 p. www.gac.ca/publications/view_pub.php?id=144<http://www.gac.ca/publications/view_pub.php?id=144>

Meinert, L.D., and Nelson, E., 2006, Terroir of Colorado's Western Slope Vineyards, Society of Economic Geologists Guidebook Series #39, Littleton, CO, 28p.

Meinert, L.D., and Curtin, T., 2005, Terroir of the Finger Lakes of New York: 18th Keck Symposium, Colorado Springs, CO, v. 18, p. 1-4.

Meinert, L.D., 2004, Understanding the mysteries of the grape: Geotimes, v. 49, #8, p. 20-23.

Costantini, Edoardo, and Meinert, L.D., 2003, Terroir of Tuscany, Italy – Examples from Montalcino and Poggibonsi: Geological Society of America, v. 35, p. 187.

Meinert, L.D., and Busacca, A.J., 2002, Geology and Wine 6: Terroir of the Red Mountain Appellation, Central Washington State, U.S.A: Geoscience Canada, v. 29, p. 149-168.

Meinert, L.D., 2002, Terroir - What it is and how to use it: Wine Grape Research News, v. 13, p. 2-4.

Meinert, L.D., and Busacca, A.J., 2000, Geology and Wine 3: Terroirs of the Walla Walla Valley Appellation, Southeastern Washington State, U.S.A.: Geoscience Canada, v. 27, p. 149-171.