

## Addendum regarding: The 2023 Certified Specialist of Wine Study Guide, as published by the Society of Wine Educators

*This document outlines the substantive changes to the 2023 Study Guide as compared to the 2022 version of the CSW Study Guide. All page numbers reference the 2022 version.*

**Note:** Many of our regional wine maps have been updated. The new maps are available on the member portal of the SWE website.

**Page 53:** the section on Cold Stabilization has been updated to read as follows: Many styles of wine—particularly white wines, but not exclusively so—tend to be quite high in tartaric acid. This acid is an important component of the wine and is not something that can or should be filtered out in the clarification process. However, when the wine gets cold, the acid may precipitate out of solution and form crystals. These precipitates—often referred to as wine diamonds—may form in the bottle and around the bottom of the cork. While harmless, they look like tiny bits of rock salt and may draw unwarranted complaints from consumers who might mistake them for impurities.

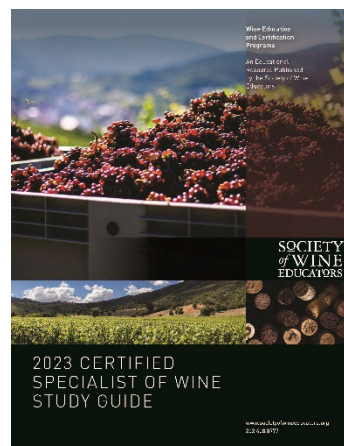
Thus, a winemaker may choose to take certain steps to prevent the precipitation of tartrates after bottling. In some cases, this involves cold stabilization—achieved by chilling the wine to around 25°F (–4°C), holding the wine at this temperature for one to three weeks, and racking the wine off the precipitates. An alternative to cold stabilization is the contact process, involving the use of finely ground bits of potassium bitartrate. These microcrystals—after being added to the chilled wine—act as nuclei and initiate the formation of tartrate crystals within a few hours, after which the wine may be filtered.

**Page 66:** the definition of “blanc de noirs” has been revised to read as follows: When used to refer to Champagne, this term refers to a cuvée made exclusively from red grapes; in other regions it is often used to describe wines based primarily on red grapes. To produce this style of wine, red grapes are crushed and the juice is pressed off the skins very quickly after harvest. These wines—which may be vintage or nonvintage—sometimes take on a very pale salmon hue.

**Page 68:** the following material has been added to the discussion on sparkling wine production:

**Transversage:** Transversage—often considered a variation on the traditional method of sparkling wine production—is sometimes used to fill very small or very large format bottles. Such bottles—including *piccolos* (quarter bottles) and bottles larger than three liters—pose production-related and logistical issues regarding sur lie aging in the bottle and disgorging. To create these specialty bottle sizes, the steps of the second fermentation, lees aging, riddling, and disgorging may be completed in a typically sized bottle (generally 750 ml). After disgorgement, the wine is placed into pressurized tanks and the dosage (if any) is added. As the final step, the wine is transferred to bottles of various sizes and made ready for distribution.

**Pages 81-82:** The material on “World Wine Production and Trade” has been updated to read as follows:  
**World Wine Production:** The global heavyweights of the wine community have traditionally been Italy, France, and Spain, which—in various orders—are consistently among the world leaders in vineyard acreage, wine production, and wine exports. Of the total volume of wine produced throughout the



world in 2022, it is approximated that 65% was produced in Europe, 10% in South America, 10% in North America, 6% in Asia, 5% in Oceania, and 4% in Africa.

China has recently joined the rank of world leaders in terms of vineyard acreage; recent statistics show that the top six countries in terms of total vineyard acreage include China along with Spain, France, Italy, Türkiye (Turkey), and the United States. (It should be noted, however, that it is not always possible to know what percentage of the total grape harvest is used for the production of wine versus table grapes, raisins, and juice products.)

While France and Italy have traditionally led the world in wine consumption, their per-capita consumption has declined slightly in recent years, and the United States is now the world’s largest overall consumer of wine (although per-capita consumption remains low).

Another significant aspect of the global wine market is that several large wine-producing countries—including Australia and Chile—produce more wine than they consume and are therefore net exporters of wine, needing to find markets in other countries.

**Page 82: Table 8-1 has been updated as shown:**

**Page 90** (and other points in the guide): The name of the Melon de Bourgogne has been updated to reflect the modernized name of the grape, and is presented (as an example) as follows: Melon (Melon de Bourgogne)

**Page 95:** the material under the heading “The Right Bank” has been updated to read as follows: The best-known wines of the Right Bank are produced in the St.-Émilion and Pomerol AOCs. In St.-Émilion, several estates—including Château Ausone and Château Cheval-Blanc—have achieved near legendary status for quality. In addition, four appellations located alongside St.-Émilion—Lussac-St.-Émilion, Montagne-St.-Émilion, Puisseguin-St.-Émilion, and St.- Georges-St.-Émilion—are known as the “satellites” of St.-Émilion and produce highly-respected wines in a similar style.

The Pomerol AOC—a tiny appellation known for its clay-based soils with an affinity for Merlot—produces some of the world’s most coveted wines; these include Petrus, Château Lafleur, and Château Le Pin.

**Page 98:** the bullet point for *St.-Émilion Grand Cru Classé* has been updated to read as follows: **St.-Émilion Grand Cru Classé:** Established in 1954, the St.-Émilion Grand Cru Classé is the only classification system on Bordeaux’s Right Bank. Any producer within the St.-Émilion AOC can theoretically achieve grand cru status—as defined by the appellation rules—by meeting the higher viticultural standards of the designation; those estates wanting to participate in the classification (classé) system must submit an application.

**Table 8-1:** Top Ten Wine-Producing Countries (2021)

TOP TEN WINE-PRODUCING COUNTRIES (2021)
1—Italy
2—Spain
3—France
4—United States
5—Australia
6—Chile
7—Argentina
8—South Africa
9—Germany
10—Portugal

Sources: International Organization of Vine and Wine (OIV), World Wine Production Outlook (November 2021)

Requiring reclassification every ten years, the system ranks the châteaux in the St.-Émilion Grand Cru appellation into two categories: *Grand Cru Classé* and the higher *Premier Grand Cru Classé* (the highest of which are designated as level “A” and “B”).

While originally positioned to be more modern and democratic than other classification systems, the St.-Émilion Grand Cru Classé ranking has been met with a great deal of controversy in recent years. In particular, the classifications announced in 2006 and 2012 were nearly annulled by a series of court cases and legal challenges. Later, in early 2021, several of the leading châteaux of St.-Émilion, including Château Angéhus, Château Ausone, and Château Cheval-Blanc—all previously *Premier Grand Cru Classé* A designees—announced that they would not be submitting applications for the 2022 renewal. Nevertheless, the 2022 designations were announced as planned.

**Page 99:** Table 9–3 has been updated as follows:

**Table 9–3:** St.-Émilion Grand Cru Classification—Premier Grand Cru Classé (September 2022)

ST.-ÉMILION PREMIER GRAND CRU CLASSIFICATION (SEPTEMBER 2022)		
Premier Grand Cru Classé A		
	Château Figeac	Château Pavie
Premier Grand Cru Classé B	Château Beauséjour	Château Larcis-Ducasse
	Château Beau-Séjour Bécot	Château Pavie-Macquin
	Château Bélair-Monange	Château Troplong-Mondot
	Château Canon	Château Trotte Vieille
	Château Canon-la-Gaffelière	Château Valandraud
	Clos Fourtet	La Mondotte

**Page 100:** The second and third paragraphs under the heading “Grape Varieties and Wine Styles” (of the Loire Valley) has been updated to read as follows:

The key white grape varieties of the Loire Valley include Melon (Melon de Bourgogne), Sauvignon Blanc, and Chenin Blanc. Small amounts of Arbois (Orbois), Chardonnay, Pinot Gris, and Folle Blanche are planted as well.

As its historic name suggests, Melon (Melon de Bourgogne) originally hails from Burgundy, although very little of it remains there. Melon is a fairly neutral white grape that tends to produce a light-bodied, very crisp style of white wine. In the Loire Valley, Melon is grown primarily in the Pays Nantais, where it is used to produce the well-known wines of the Muscadet AOCs.

**Page 107:** the material on Alsace has been updated to include the following: Alsace has a hierarchy system for its vineyards; 51 have been accorded grand cru status to date, with the majority located in the Haut-Rhin. With few exceptions, Alsace Grand Cru AOCs are approved for single-variety, white wines produced using one of the “noble varieties” of Gewurztraminer, Muscat, Pinot Gris, or Riesling. Alsace Grand Cru wines are not allowed to be chaptalized and must follow strict standards for yields and minimum ripeness levels. (Note: in 2022, the regulations of the Alsace Grand Cru Hengst and the Alsace Grand Cru Kirchberg de Barr were revised to allow for red wines made with Pinot Noir; this represents quite a break with tradition.)

**Page 122 (and others):** references to the Vermentino grape variety have been updated to reflect the fact that outside of Italy, the grape goes by alternative names such as *Rolle* or *Malvoisie de Corse*.

**Page 123:** the second paragraph under the heading “Provence” has been updated to read as follows: As of the 2021 vintage, rosé accounts for nearly 90% of the wine produced in Provence. Provence rosé is generally made from a blend of grapes; the leading grapes include Grenache, Cinsault, Syrah, Mourvèdre, and Tibouren. Provence produces only a small amount of red wine (6%), supplemented by an even smaller production of white wine (4%).

**Page 144:** the material regarding the grape varieties of Spain has been updated to read as follows: Spain’s vast vineyard acreage is heavily oriented toward the country’s indigenous grape varieties, including Tempranillo and Airén, which (combined) account for almost 42% of all plantings. In 2021, it was reported that Tempranillo—Spain’s illustrious, indigenous red grape variety—had increased to the point where it now holds the number one spot as the most widely planted grape. Tempranillo is widely grown around the country—particularly in the northern part of the Meseta—and is known by many (often regionally-specific) different names. Tempranillo is known for producing age-worthy red wines with moderate acidity and aromas of spice, chalk, strawberries, and tobacco (often with an assist from contact with oak).

The country’s second leading grape—Airén—is considered a somewhat neutral white variety used primarily for making brandy and blended wine (which may include a good deal of bulk wine). However, it is increasingly used in single-variety (often oak-aged) whites as well. Airén is believed to be native to Castilla-La Mancha and is widely grown in the central regions of Spain.

Other well-respected varieties found in many parts of Spain include the red grapes Garnacha (Grenache), Bobal, and Monastrell (Mourvèdre). Leading white grapes include Cayetana Blanca and Macabeo (Viura).

**Page 145:** the bullet point for *Vino de Pago* has been updated to include the following information: *Vino de pago*: Established in 2003, the *vino de pago* category is a government-granted protected designation of origin intended to recognize single-vineyard wines of distinction. Regional specificity and estate bottling are required.

**Page 148:** the first paragraph in the section under the heading “RIOJA” was revised so that it reads as follows: Rioja is considered the most famous red wine of Spain and is unquestionably one of its best. The wines of Rioja have been defined since (at least) 1787, when the *Real Junta de Cosecheros* (Royal Board of Winegrowers) was created with the objective to protect the region, promote the wines, and facilitate trade. Given this long history of quality production, it is no surprise that Rioja was the first region to be elevated to DOCa status (in 1991).

**Page 151:** the section under the heading “Grape Varieties” (of Sherry) has been updated to read as follows: The primary grape used in the production of Sherry is the indigenous Palomino, which is the sole or majority grape variety in most of the wines of the region. Pedro Ximénez—often shortened to *PX*—is grown in small amounts and used to produce an intensely sweet, dried-grape Sherry that often has a deep mahogany hue (sometimes likened to the appearance of molasses). Moscatel (Muscat of Alexandria)—also grown in small quantities—is used in the production of a very sweet, dried grape dessert wine, and may be used as a sweetening agent for various types of Sherry.

**Page 154:** the second paragraph under the heading “Geography of the Cava DO” has been updated so that it reads as follows: Three other zones—spread across Spain—are approved for the production of

Cava DO. These include the Valle del Ebro (Ebro Valley), the Altos de Levante (located in Valencia), and the Viñedos de Almendralejo (Almendralejo vineyards, located in Extremadura).

**Page 183:** the entry under the heading “Wagram” has been updated to read as follows:

Wagram DAC: The Wagram DAC is located along the Danube River to the east of Wachau, Kremstal, and Kamptal. Grüner Veltliner is the most widely-planted grape in the region and is typically made into rich, flavorful, and characteristically spicy white wines. Other leading grapes include Roter Veltliner (a pink-skinned grape that—despite its name—has no direct genetic link to Grüner Veltliner), Riesling, Pinot Noir, and Zweigelt. Prior to 2007, this area was known as *Donauland*.

**Page 194:** the section under the heading “TURKEY” so that it reads as follows: Türkiye (Turkey)—a relatively liberal Islamic state with one foot in Europe and the other in Asia—is one of the largest grape-growing countries in the world. Türkiye is home to over 600 Indigenous vinifera varieties; of these, at least 60—including Yapincak (white), Papazkarasi (red), Öküzgözü (red), Boğazkere (red), and Çalkarasi (red)—are used for commercial wine production. However, the vast majority of the country’s grapes are sold as table grapes or raisins.

Most of the country’s current laws and regulations regarding wine are administered by the Tobacco and Alcohol Market Regulatory Council, which focuses mainly on the sales and distribution side of the industry. Other wine regulations include a basic set of viticultural standards, written into the country’s overall “Law of Agricultural Insurance” in 2005. Most of the wines of Türkiye are rarely seen outside the country, however, Kavaklıdere—its largest producer—does export its wines internationally. Production includes wines from both native and international varieties.

**Page 202, 209:** the information on the number of American AVAs has been updated to read as follows: As of December 2022, 267 distinct AVAs had been approved in over 30 different states; of these, 147 are in California (and these numbers are sure to increase in the future).

**Page 213:** The information under the heading “The Sonoma Coast” has been updated to include the following: The Sonoma Coast AVA has three sub-appellations, as follows:

- **West Sonoma Coast AVA:** The West Sonoma Coast AVA hugs the rugged coastline of Sonoma County and exhibits an overall cool, maritime climate. This area—which includes the Fort Ross-Seaview AVA—is largely defined by the steep mountains and ridgelines of the Sonoma Coast Highlands/California Coast Range.

**Page 215:** the information on Mendocino County has been updated to include the following: Mendocino County is home to the smallest AVA within California—the Cole Ranch AVA.

**Page 216:** the material under the under the heading “Lake County” has been updated to include the following:

Lake County currently has eight designated AVAs:

- Clear Lake AVA
- Benmore Valley AVA
- High Valley AVA
- Red Hills–Lake County AVA
- Big Valley District–Lake County AVA

- Kelsey Bench–Lake County AVA
- Guenoc Valley AVA
- Upper Lake Valley AVA

**Page 217:** the following entry has been added to the section on San Luis Obispo County:

- The San Luis Obispo Coast AVA—also known as the SLO Coast—stretches for over 60 miles/115 km along the Pacific Coastline from Ragged Point to just beyond Grover Beach. This coastal-influenced, cool-climate area includes the Edna Valley and the Arroyo Grande Valley AVAs.

**Page 221:** the following entry has been added to the section on Washington State AVAs:

**Rocky Reach AVA:** Approved in 2022, the Rocky Reach AVA is located south of Lake Chelan, near the northern end of the Columbia Valley. The area—planted mainly to Cabernet Sauvignon—follows a narrow stretch of the Columbia River atop a unique crystalline type of bedrock.

**Page 223:** the first paragraph in the section on “Oregon Appellations” has been updated to read as follows: Nearly three-quarters of Oregon’s vineyards fall within the large, cool-climate Willamette Valley AVA, situated approximately 50 miles (80 km) from the Pacific Ocean. The Willamette Valley includes 11 sub-appellations, as follows:

- Chehalem Mountains
- Dundee Hills
- Ribbon Ridge
- Eola-Amity Hills
- Laurelwood District
- Lower Long Tom
- McMinnville
- Mount Pisgah-Polk County
- Tualatin Hills
- Yamhill-Carlton District
- Van Duzer Corridor

**Pages 224 to 225:** the section on Canada has been updated to read as follows:

Canada’s small-but-dynamic modern wine industry can be traced back to 1974 and the repeal of a decades-long moratorium on new winery licenses. This led to the establishment of several new wineries and at this same time, the industry began to turn its focus from native North American varieties and hybrid grapes to vinifera varieties and international trade. The Inniskillin Estate Winery in Niagara-on-the-Lake—one of the first of these new wineries—is often credited with creating the reputation of one of the country’s most beloved products: Canadian Icewine.

Canada’s wine production is concentrated in the provinces of Ontario and British Columbia; other regions—notably Nova Scotia and Quebec—produce wine as well, as discussed below.

**Ontario:** The province of Ontario—home to the nation’s capital city (Ottawa) as well the country’s most populous city (Toronto)—is the largest wine producer out of Canada’s 13 provinces and territories. Ontario is located along the northern border of the United States and contains nearly 17,000 acres/6,880 ha of commercial vineyards, thus accounting for nearly 55% of the nation’s total.

The majority of Ontario's vineyards lie in the southern half of the province, situated between the 41<sup>st</sup> and 44<sup>th</sup> parallels. The cool continental climate of this inland region is moderated by the presence of the Great Lakes—primarily Lake Ontario and Lake Erie. As such, the area does not usually experience extreme heat and while the winters are cold, vine-killing levels of deep freeze are typically avoided.

Since 1988, the vineyards and wines of Ontario have been regulated via an appellation and quality control system known as the Vintners Quality Alliance (VQA). The VQA began as a voluntary system but has had the force of law in Ontario since 1999. The VQA mandates certain quality and labeling standards and defines the area's appellations of origin, known as Dedicated Viticultural Areas (DVAs). Ontario currently has three primary DVAs—Niagara Peninsula, Lake Erie North Shore, and Prince Edward County—as well as several regional appellations and sub-appellations. The Niagara Peninsula DVA—radiating around Lake Ontario—is the leading region, with close of 85% of the province's vines.

Ontario is currently planted to approximately 60% white grapes and 40% red grapes. Leading varieties include Riesling, Cabernet Franc, Chardonnay, and Pinot Noir. While the majority of the area's production is dry table wines, the area is highly renowned for its Icewine, most often produced from Vidal or Riesling grapes. Ontario is the world's leading producer of Icewine by volume.

**British Columbia:** British Columbia, located on Canada's Pacific Coast, is the second largest wine producing region in Canada and home to just over 35% of the country's vines. Located along the 49<sup>th</sup> parallel—north of Washington State—this is one of the world's northernmost wine-producing regions. Leading grape varieties of British Columbia include Chardonnay, Pinot Noir, Riesling, Cabernet Sauvignon, and Merlot.

The great majority of British Columbia's vines are located in the Okanagan Valley—a long, narrow, and dry valley situated inland of the Coast Mountain Range and tucked between the Cascades and the Columbia Mountains. The valley's continental climate is somewhat assuaged by the northerly latitude and the presence of Lake Okanagan.

The Okanagan Valley is home to most of British Columbia's Dedicated Viticultural Areas (DVAs) and has seen the recent approval of several new appellations and sub-appellations. Other areas of British Columbia that support commercial viticulture include those located on Vancouver Island, other Gulf Islands, the southwest coast, and the Kootenays (a region in the province's southeast).

The British Columbia Wine Authority (BCWA) was established in 1990 to oversee wine quality, labeling standards, and appellations of origin (Designated Viticultural Areas/DVAs). The BCWA has adopted a quality control system referred to as the *BC Vintner's Quality Alliance* (BC VQA)—as well as a set of standards for wines labeled as "Wine of Marked Quality."

**Quebec:** Located to the north of New York and Vermont, the province of Quebec contains the city of Montreal as well as the provincial capital, Quebec City. This cool-climate region produces a range of wines and wine styles based around cold-hardy hybrid varieties such as Frontenac, Vidal, Seyval Blanc and Marquette—although vinifera varieties are planted in increasing amounts. Icewine—*Vin de Glace du Québec*—is a particular specialty.

**Nova Scotia:** Located on Canada's eastern edge, the province of Nova Scotia produces small amounts of a range of wine types and styles. However, the region's flagship wine is *Tidal Bay*. The name *Tidal Bay* is

strictly regulated and reserved for still (non-sparkling) white wines produced from 100% Nova Scotia grapes. Tidal Bay wines are fresh and crisp in acidity, dry to off-dry, and highly aromatic.

**Pages 242 to 244:** the section on Australian Appellations has been updated to read as follows:

**South Eastern Australia:** South Eastern Australia is a multi-state GI encompassing the entirety of New South Wales, Victoria, Tasmania, and the Australia Capital Territory—as well as a portion of South Australia and a narrow swath of southern Queensland. This vast area covers the majority of the commercial vineyards of Australia, with the exception of those found in the state of Western Australia. A large volume of wine—typically value-priced, and much of it sourced from multiple regions, grape varieties, and even vintages—is labeled under the South Eastern Australia GI.

**South Australia:** Located in the center of the southern half of the Australian land mass, the state of South Australia is responsible for nearly half of the country's total output of quality wine each year. Geographically, South Australia is large and impressive: from east to west, the state stretches on for nearly 750 miles (1,200 km). Its southern border follows the coastline of the Great Australian Bight, while the Mount Lofty and Flinders Mountain Ranges are located further inland. As such, the climate, soils, and topography vary considerably across the vast state. Some of the better-known GIs of South Australia are discussed below.

- **Clare Valley:** Located about 80 miles/130 km north of Adelaide, many of the vineyards of the Clare Valley are planted at elevations ranging from 1,300 feet to 1,640 feet (400 meters to 500 meters) above sea level. While Shiraz is the mostly widely planted grape by acreage, the Clare Valley is particularly well-known for its high-quality, intensely flavored, and age-worthy dry Riesling.
- **Barossa Valley:** Located in the warm, dry interior of the state—and having avoided any problems with phylloxera—the Barossa Valley is home to some of the oldest vines and wineries in the country. This region is primarily known for powerful red wines based on Shiraz.
- **Eden Valley:** The Eden Valley region is located just inland (east) of the Barossa Valley, and at a slightly higher elevation—and therefore, with a slightly cooler climate. The Eden Valley's intense sunshine and extended growing season are ideal for the cultivation of Shiraz and Cabernet Sauvignon in addition to the region's highly regarded dry Riesling.
- **McLaren Vale:** Located about 22 miles/35 km south of the city of Adelaide—and stretching from the Gulf of Saint Vincent inland towards the Mount Lofty Ranges—the McLaren Vale GI enjoys a generally Mediterranean climate. The area is primarily renowned for Shiraz; but other varieties—including Cabernet Sauvignon, Grenache, and Chardonnay—thrive here as well.
- **Coonawarra:** This is the best known of the six regions of the Limestone Coast Zone, famous for its bright red soil—*terra rossa*—which rests over a free-draining limestone base. Due to its soil composition and warm summers, this area produces some of the country's most distinctive Cabernet Sauvignon.
- **Riverland:** Riverland is an expansive region located in the eastern section of South Australia (bordering the state of Victoria). Riverland is one of the largest-producing GIs



in Australia in terms of volume, and most of the country's largest wine brands have vineyards here. A range of grape varieties are grown in Riverland—led by Shiraz, Chardonnay, Cabernet Sauvignon, Merlot, and Petite Verdot.

**New South Wales:** New South Wales—located on Australia's east coast and surrounding the dynamic city of Sydney—is Australia's most populous state. New South Wales is where (in the 1800s) James Busby planted some of the country's first European vines and remains home to Wyndham Estate—one of the country's oldest wineries, established in 1827. The Great Dividing Range separates the moderate-climate coastal areas from the more arid interior, with much of the state's vineyard acreage concentrated in the heavily irrigated agricultural areas inland of the mountains. The leading GIs of New South Wales include the following:

- **Hunter Valley:** With a history dating back to the beginning of Australian viticulture, this area just north of Sydney is hot and humid, made suitable for winegrowing by the cooling effect of the afternoon sea breezes. The zone is known particularly for its Semillon—sometimes referred to *Hunter Riesling* or *Hunter Honey*—and often capable of extended aging. Other leading grapes of the Hunter Valley include Verdelho, Shiraz, and Cabernet Sauvignon.
- **Mudgee:** Mudgee—after the Aboriginal name for *nest in the hills*—is located inland of the Hunter Valley, on the west side of the Great Dividing Range. With vineyards approaching 2,000 feet (610 m) in elevation, the area is sunnier and less humid than its famous neighbor to the east. The region focuses on deep, intensely flavored red wines crafted from Cabernet Sauvignon, Shiraz, and Merlot. However, Mudgee was also one of the first areas in the country to cultivate and produce varietal Chardonnay (which remains the leading white grape).
- **Riverina**—whose name describes it well, evoking a *river-crossed plain*—is the largest of Australia's regions in terms of total land area. The rivers of the area—including the Murray and the Murrumbidgee—provide much-needed irrigation. Many of the grapes grown here are used in branded, bulk wine (including the country's famous mega-brand, Yellow Tail). However, fine wine is produced here as well; and some areas possess the humid, misty mornings and dry, warm afternoons conducive to the development of noble rot—making Semillon-based dessert wines a (niche) specialty.

**Victoria:** Viticulture in Victoria—mainland Australia's smallest and coolest (climate) state—dates to the 1830s, when vines were planted at Yering Station, just east of Melbourne. A few decades later, gold was discovered in the area and the population—as well as the demand for wine—exploded. Unfortunately, this early success was short-lived, as Phylloxera devastated the area beginning in the 1870s and many of Victoria's vines were uprooted by government decree. The wine industry began to rebound in the 1960s and these days, prime vineyards and quality wine producers may be found across the state. The leading wine regions of Victoria are discussed below.

- **Yarra Valley:** The Yarra Valley—located just inland of the city of Melbourne and following the path of the Yarra River—is home to Yering Station and the first-ever commercial vineyards in Victoria. The area's rolling topography, proximity to Port Philip

Bay, and overall cool climate allow for the production of world-class Pinot Noir and Chardonnay, which together account for nearly 75% of all plantings.

- **Mornington Peninsula:** This small, seaside region enjoys a distinctly maritime climate and is home to over 200 small-scale vineyards and boutique wine producers. Located about 45 miles/70 km southeast of Melbourne, the area is surrounded on three sides by bodies of water (Port Philip Bay, Western Port Bay, and the Bass Strait). Pinot Noir—planted to nearly 48% of the vineyards—is the leading grape variety, followed by Chardonnay and Pinot Gris.
- **Rutherglen:** Located close to Victoria’s northern border, the Rutherglen Region has a markedly hot, continental climate. While table wines (mainly Shiraz and Cabernet Sauvignon) are produced in the area, Rutherglen is best known as Australia’s leading region for fortified wine. Rutherglen Muscat—intensely sweet, fortified, often well-aged, and sometimes oxidized—is produced using dark-skinned Muscat Rouge à Petit Grains grapes (known locally as *Brown Muscat*). A fortified wine produced using Muscadelle—often served as an aperitif—is known as *Topaque*.
- **Heathcote:** Known for premium Shiraz, Heathcote has a distinctive climate influenced by cool winds that descend from the Mount Camel Ranges and moderate the summer temperatures, allowing for an extended growing season and optimum phenolic development. Heathcote is also noted for its soils—containing calcium-rich, volcanic greenstone—prized for their capability to retain water and largely eliminating the need for irrigation.
- **Murray Darling:** Murray Darling—a large region shared between the states of Victoria and New South Wales—is a warm-to-hot climate region spread across a flat, semi-arid plain. The area is marked by the presence of the Murray River and planted to a wide range of grape varieties, including Vermentino, Barbera, Nero d’Avola, and Sangiovese in addition to the varieties more typically found in Australia.

**Western Australia:** Despite its impressive size—it covers basically the entire western third of the country—the state of Western Australia produces just a small percentage (estimated at 7%) of Australia’s wine. While much of the state (particularly the area in the north and east) is too hot to support quality viticulture, some ocean-cooled sections of the southwest coast—as well as the hills and valleys surrounding the city of Perth—have been making fine wine since the 1800s. The best-known wine regions of Western Australia include the following:

- **Margaret River:** Located at Australia’s southwestern extremity, Margaret River is arguably the state’s most acclaimed region. The area benefits from the constant sea breezes blowing in from Geographe Bay and the Indian Ocean; this keeps the area very cool in what would otherwise be a warm-to-hot climate. Cabernet Sauvignon and Shiraz do very well here; however, the Margaret River Region is especially prized for its white wines—including elegant Chardonnay and intense Sauvignon Blanc–Semillon blends.
- **Great Southern:** The expansive Great Southern GI stretches for close to 95 miles/153 km along the south coast of Western Australia. Proximity to the coast as well as its solid placement within the temperate zone—the region’s northern edge aligns quite well with the 34<sup>th</sup> parallel—keeps the region cool, especially in the areas closest to the coast.

Riesling and Pinot Noir reign in the cooler areas; Cabernet Sauvignon, Shiraz, and Chardonnay are grown further inland.

- **Perth Hills:** Located just inland of the city of Perth and following the contour of the Darling Scarp, the Perth Hills Region extends for over 70 miles/110 km from north-to-south. The hills, valleys, and slopes of the area—ranging from 500 feet/150 meters to 1,310 feet/400 meters in elevation—create a patchwork of climates and terroir. Leading grapes include Shiraz, Cabernet Sauvignon, Merlot, Chardonnay, and Semillon.
- **Swan District:** The Swan District—along with its Swan Valley subregion, tucked into the district’s southeast corner—is located north of the city of Perth. The area’s warm-to-hot, mostly Mediterranean climate is at times cooled by the *Freemantle Doctor*—the name given to the prevailing breezes blowing in from the Indian Ocean. The Swan District specializes in the classic wines of Australia—including Shiraz, Cabernet Sauvignon, and Chardonnay.

**Tasmania:** The island of Tasmania—located 150 miles (241 km) off the coast of Victoria—is the southernmost of Australia’s wine areas. The island—home to a wide range of soils as well as snow-capped mountains, temperate rainforests, and coastal plains—is quite diverse in terms of topography and boasts the coolest climate in all of Australia. Pinot Noir is the leading grape variety, but white grapes—including Chardonnay, Pinot Grigio, Sauvignon Blanc, and Riesling—outnumber red plantings by a small margin. Many of the grapes grown Tasmania are used to produce sparkling wine—a specialty of the region.

**Queensland:** The large state of Queensland—located in Australia’s northeastern corner—is well known for Gold Coast surfing beaches, the Great Barrier Reef, and the dynamic city of Brisbane. While most of the area—particularly the large expanse located to the west of the Great Dividing Range—tends to be too warm and humid for viticulture, it does have a small-but-growing wine industry (much of it geared towards wine tourism). The Granite Belt GI—located in the far south of the state close to the border shared with New South Wales—features high-elevation vineyards planted to a range of grape varieties led by Shiraz, Cabernet Sauvignon, and Verdelho. The state’s other GI—South Burnett, situated along the 26th parallel and featuring a sub-tropical climate—is the northernmost geographical indication (region) in the country.

**Page 264:** the sections on “Wine Laws and Regulations in Japan” have been updated to read as follows:

**Wine Laws and Regulations in Japan:** In 2005, Japan introduced regulations requiring that a product marketed as a “Wine of Japan” be produced entirely with grapes grown in the country. Previously, wines produced in Japan—regardless of the origin of the grapes—were allowed to be sold as “Japanese Wine.” Subsequent laws have been passed requiring varietal wines to be produced using a minimum of 85% of the named grape variety and limiting the use of places-of-origin (including geographical indications) to wines that are comprised of a minimum of 85% grapes grown in the named place.

**Geographical Indications:** As of 2022, Japan has five geographical indications for wine. The first was awarded (in 2013) to the Yamanashi Prefecture, located on the island of Honshu and approved for wines produced using a range of grape varieties, including Koshu and Muscat Bailey-A. In 2018, the island of Hokkaido was awarded Japan’s second geographical indication. Hokkaido GI wines are produced using Koshu, Muscat Bailey-A, and several other grapes—including the unique, cool-climate Pinot Noir grown

on the island. In 2021, three more regions—all located on Honshu—were so indicated. These include Nagano GI (located in the center of the island and now the second-largest producer in terms of volume), Yamagata GI (located in the northern part of Honshu, facing the Sea of Japan), and Osaka GI (specializing in the Delaware grape variety and located in the foothills near the large city of the same name).

**Page 267:** the following material has been added to the chapter’s introductory material: The sensory evaluation of wine—wine tasting—may be described as *organoleptic evaluation*. The term *organoleptic* refers to the chemical and physical properties of a substance that affect the senses. Thus, when one is conducting an organoleptic (sensory) evaluation of a wine—or spirit, food, or other ingredient—one is drawing attention to and describing the product in terms of its aromas, tastes, texture(s), flavors, and anything else one might experience.

**Page 272:** the section on “Color” has been expanded to include the following information: When discussing color, we often start with identifying the wine’s *hue*, or *color identity*. This is the term used to describe the color’s placement on the spectrum known as the *color wheel* and gives the color its name—such as yellow, gold, purple, ruby, or garnet. Another aspect of color is *depth*, which technically refers to how much visible light can travel through a given object (or a liquid). Items or liquids that allow a good deal of light to travel through have some degree of transparency and may be described as *pale* (or some variation thereof). Items (or liquids) that allow less light through are not as “see-through” and may be described with terms such as *medium*, *deep*, or *opaque*. The color intensity (depth) of red wines is often discussed in terms of whether or not they are “read-through,” meaning one can “read a newspaper” placed behind the wine.

To evaluate a wine’s color, begin by holding the wine glass over a white surface. Tip the glass at an angle to view the wine from the edge of the glass to the center and take note of the color in terms of both depth and hue. To compare the colors of several wines, place the glasses on a white surface, fill them evenly, and inspect the wines from above, from the side, and after tilting the glass(es).

**Page 276:** the section under the heading “Balance” has been updated to read as follows:

**Balance:** One of the most desired traits in a wine is *balance*, where the concentration of components comprising the wine’s taste, flavor, and structure form a cohesive harmony. In a balanced wine, no single aspect—such as fruit, sweetness, acidity, tannin, oak, or bitterness—overwhelms the others or stands out to the detriment of the whole. Rather, in a balanced wine, these components are in proportion and appropriate to the style of the wine.

While balance is the hallmark of a quality wine, recognizing the impact of an *unbalanced* wine can be helpful to understand the concept and its accompanying terminology. For instance, a wine that is overwhelmed by alcohol may be deemed as *hot*, while a wine described as *cloying* may seem too sweet via-a-vis the other components of the wine (namely acidity). Additionally, a *flabby* wine may seem flat or low in acid (and consequently lacking in structure).

**The following entries have been added to or updated in the glossary:**

- **Contact process:** A winemaking procedure involving the use of bits of potassium bitartrate to initiate the formation—and subsequent removal—of tartrate crystals from the wine before bottling
- **Délestage:** French. The French term for “rack and return,” a type of two-step cap management process in which the fermenting juice is drained into a separate holding tank before it is returned to the original tank by spraying it over the now sunken cap; see also rack and return

- **Rack and return:** a type of two-step cap management process in which the fermenting juice is drained into a separate holding tank before it is returned to the original tank by spraying it over the now sunken cap; see also *délestage*
- **Transversage:** A method of sparkling wine production—often considered a variation of the traditional method—that may be used to fill very small or very large format bottles using wine previously held in traditionally-sized bottles