

WELCOME

Throughout history herbs have been collected, cultivated, studied, and used by many different civilizations. Modern herb gardens have been particularly influenced by the medieval gardens of European monastic communities. This brochure introduces some of the several hundred species and cultivars in our collection.



Among the traditionally inspired plantings surrounding the ornamental sundial and knot gardens, you will find rare and unusual plants along with the familiar that provide food, flavorings, fragrances, teas, medicines, dyes, wine, beer, and liquors.

We use the term *herb* broadly as a useful plant. The Herb Garden is divided into sections according to the primary use of the herbs. Look for the individual bed numbers and signs to help you locate a plant. In spring and summer the Garden is at its height with bright flowers and lush green leaves. Fall and winter bring fruits, berries, and seeds. Remember some herbs are also prized for their bark or for their “invisible” underground parts.

For your own safety and in accordance with UCBG rules, PLEASE DO NOT PICK OR TASTE any part of the plants.



Herb Garden History

This Herb Garden owes its existence to the inspiration of Elizabeth Rollins, who designed and planted it in the late 1940s as a volunteer.

Contributors

The UC Botanical Garden thanks Linda and Greg Govan and an anonymous donor for supporting this publication.

UCBG volunteer contributors:

Project Coordinator: Barbara Lyss **Writers:** Alison Mills, Barbara Lyss, Ramona Davis, Kori Kody, Jan Vargo

Photographer: Emmy Randol **Cover Photo:** Yoni Mayeri

Visit Our Website

Explore more about the Herb Garden on our website:

<http://botanicalgarden.berkeley.edu>

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UNIVERSITY of CALIFORNIA BOTANICAL GARDEN at BERKELEY

HERB GARDEN



CULINARY HERBS

Vegetable roots, tubers, leaves, stems, and flowers provide a healthy variety of nutrients in our diets. Growing here are some less well-known traditional perennial vegetables and herbs used in condiments and as seasonings.

WELSH ONION (*Allium fistulosum*). Bed 410. Onions along with scallions, shallots, chives, leeks, and garlic all contain sulfur compounds, which are antibacterial and anti-oxidant, thus providing health benefits while adding savory flavor to dishes. Slicing onions releases the sulfur compounds into the air, which can cause eye irritation and tears. The welsh onion originated in Asia; the term *welsh* is based on the old English word for foreign.



SKIRRET (*Sium sisarum*). Bed 415. Of Asian origin, skirret has been cultivated in Europe for centuries. One seventeenth-century English recipe calls for boiling the white protein-rich roots, mixing with butter, eggs, and spices, then baking them in a *coffin*, a high-sided pie shell. *Skirret* is from the Dutch for sweet root.

ANGELICA (*Angelica archangelica*). Bed 410. This entire plant is aromatic. The candied stems of angelica are used to decorate cakes and desserts. Dried leaves and the long taproot are used to flavor liquors, beers, liqueurs, and candies. Angelica can cause skin reactions in sensitive people. The fluted stem of this elegant plant, which can reach heights of up to six feet, was thought to be the inspiration for the Greek Doric column form.

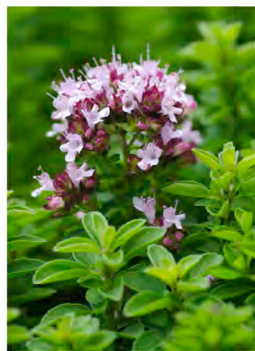


Additional culinary plants include sorrel, salad burnet, and alexanders.

SEASONINGS

Beds 410, 411, 415. Chemical compounds in these plants create flavors and odors that in nature may serve to deter insect or animal herbivores, or they may leach into the soil, inhibiting competitive plant growth. Fresh or dried herbs may be used singly or combined with others in savory dishes or to flavor oils and vinegars.

BAY LAUREL (*Laurus nobilis*). The aromatic leaves of the laurel, or bay tree, trimmed here in a decorative topiary form, add a subtle refreshing taste when simmered in sauces and stews. In ancient Greece the leaves were also used to create the original crown of laurels awarded for achievements from which we get the terms *baccalaureate* and *poet laureate*.



OREGANO (*Origanum* spp.). Our collection includes over twenty *Origanum* species native to several countries, each with a unique flavor. *Origanum vulgare* gives the distinctive robust taste to many Italian dishes.

SWEET MARJORAM (*Origanum majorana*) has a more subtle flowery oregano flavor, thus is desirable in lighter sauces.

COMMON SAGE (*Salvia officinalis*) is a perennial herb frequently used in meat stuffings. **COMMON THYME** (*Thymus vulgaris*) has flavors ranging from mild to robust and can have notes of nutmeg, mint, lemon, or pineapple, depending on the species.

CONDIMENTS

Condiments provide a spicy contrast to a savory dish, enhancing its flavors. Among them are **HORSERADISH** (*Armoracia rusticana*), Bed 415, whose long, thick, pungent root is grated and then mixed with vinegar or sauces.

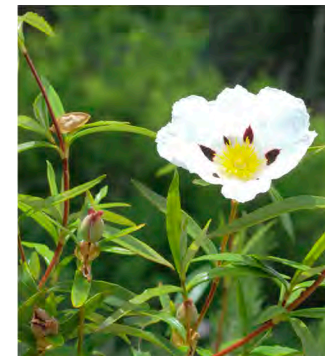
The pickled flower buds and fruits of the **CAPER PLANT** (*Capparis spinosa*), Bed 410, are sprinkled on food to provide color and spice.



HERBS FOR FRAGRANCE

People throughout history have used aromatic plants in their daily lives—perhaps to mask unpleasant odors, repel insects and pests, or to cleanse the air both physically and spiritually. Fragrant herbs and their extracts find a place in many cultures in rituals such as the anointing of leaders and warriors, and in marriage, initiations, and funeral rites. In perfumery all parts of the plant—flowers, seeds, roots, bark, leaves, and fruit as well as gums and resins—may be harvested and processed with varying levels of sophistication, from crushing and drying to steam distillation and supercritical fluid extraction.

LABDANUM (*Cistus ladanifer*). Bed 414. The leaves and stems of this shrub exude a sticky aromatic resin. Greek folklore describes the collection of this substance by long-haired goats wandering through dense shrubby thickets. The flock's owner subsequently combed out the valuable resin. In perfumery, it is considered a substitute for ambergris (the rare and exotic substance excreted by the endangered sperm whale). Labdanum imparts a musky quality, acting as a fixative rather than as a dominant scent.



VETIVER (*Chrysopogon zizanioides*). Bed 414. This grass, native to India, is also widely grown in Japan, Brazil, Indonesia, and Haiti, where oil extracted from its long roots is used extensively in perfumery. Traditionally the roots are woven into rough curtains, sprinkled with water, and hung in homes to cool and scent the air. Vetiver is estimated to be an ingredient in about 90% of all commercial perfumes made in the Western world.

ORRIS (*Iris germanica* var. *florentina*). Bed 414. The rhizome (underground stem) of this iris is dried and ground to produce orris root powder. As an ingredient in perfumes and dried potpourri, it enhances and fixes the fragrance, in particular the sought-after scent of violets. In eighteenth-century Europe, it was used for powdering fashionable wigs.

Additional fragrance plants include lavender, apothecary's rose, and rosemary.

HERBS FOR WINES, BEERS, & LIQUORS

From earliest times people have used yeasts to ferment fruits, such as grapes, to produce wine, and starchy grains, such as barley, to make beer. These lightly alcoholic beverages were often safer to drink than the frequently unsanitary water and provided an important source of calories. In the early twelfth century, European alchemists and apothecaries adopted Eastern distillation techniques to produce stronger alcohol, which they used in medicines. Alcohol is an excellent solvent and is used to extract plant compounds.

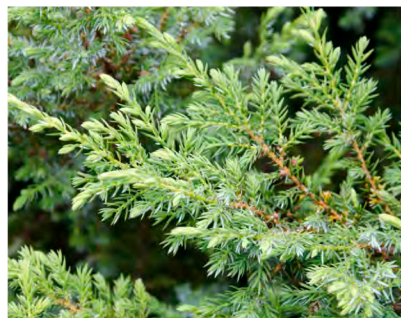
GRAPE (*Vitis* spp.). Bed 416. The grape differs from other plants in this category: it produces one unique alcoholic beverage—wine, historically the preferred drink of the Romans and others in southern Europe. Grapes, especially the main wine grape *Vitis vinifera*, are sweet enough to encourage the yeasts necessary for fermentation and acid enough to inhibit the growth of undesirable microbes. Herbs may be added to wine to enhance stability, to add flavor, color, and aroma, and to create medicinal potions.



COMMON HOP (*Humulus lupulus*). Bed 416. Beer is a mildly alcoholic drink made by fermenting grain after it has been malted (sprouted). Early European brewers enhanced the flavor of beer by adding gruit, a mix of various herbs. Gruit fell out of favor by the end of the fourteenth century when most European brewers started using the female flowers of hop, a fast-growing perennial vine in the hemp family. Hops add pleasing aromas and a distinctive bitter taste to beer and also act as a natural preservative.



COMMON JUNIPER (*Juniperus communis*). Bed 416. Distillation of alcohol techniques led to the introduction of a new class of drinks such as gin, a clear, high-proof spirit that gets its unique flavor from juniper berries, the fleshy blue female cones of this prickly evergreen shrub. Herbs are used to provide a variety of unique flavors for spirits. The secret recipe for Benedictine may feature over two dozen plants, while the recipe for Chartreuse may include over one hundred plants.



Additional beers & liquors plants include blackthorn, wormwood, and sweet woodruff.

MEDICINAL PLANTS

The plant kingdom has traditionally been our ally in the quest to ease pain and overcome disease. Modern science shows that plants are excellent chemists, producing substances that have profound effects on human biology. The medicinal plants in this herb garden represent the Mediterranean and northern European healing traditions.

FOXGLOVE (*Digitalis purpurea*). Bed 405. Foxglove was the first folkloric medicinal to be incorporated into scientific literature. In 1775 an English physician established that symptoms of congestive heart failure—then called dropsy—could be treated by a tea infused with a standardized dosage of foxglove leaves. Modern medicine still makes use of its powerful extracts, such as digoxin, to strengthen the heart muscle contraction.



MEADOWSWEET (*Filipendula ulmaria*). Bed 407. Meadowsweet was one of the herbs considered most sacred to the Druids of the British Isles. An ancient medicinal, its leaves and flowering tops were used as a gentle tea to treat fever, inflammation, digestive upset, and gastritis. All parts of meadowsweet contain the compound salicin, which was used by chemists in the late nineteenth century to develop aspirin (acetylsalicylic acid)—the world's first synthetic pharmaceutical. The name aspirin refers to the plant's original genus *Spiraea*.



ELDERBERRY (*Sambucus nigra*). Bed 407. Called “a medicine chest in a tree,” the leaves, flowers, and berries of black elderberry were traditionally infused into teas and wine to combat illnesses of the upper respiratory tract, such as flu and bronchitis. Scientific research has validated that constituents of the berries protect against the influenza virus.



Additional medicinal plants include St. John's wort, rue, and henbane.

HERBS FOR TEA

Herbal tea is any non-caffeinated beverage made from an infusion or decoction of herbs, spices, or other plant material. Until true tea (*Camellia sinensis*), with its associated social and ceremonial uses, was introduced to Europe from Asia, tea plants were healing herbs grown in the herb gardens of medieval monasteries. Teas are made by pouring boiling water over fresh or dried flowers, leaves, seeds, and/or roots, and steeping. For tea made only from roots or seeds, boiling in water is the most effective method.

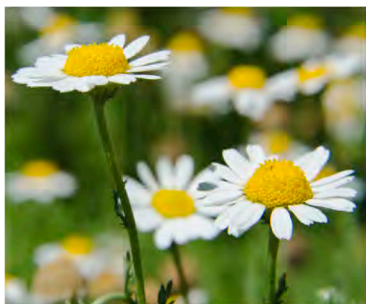
CATNIP (*Nepeta cataria*). Bed 406.

Catnip tea, made from the dried leaves and/or flowering tops, is mainly used as a calming and sleep-inducing remedy. For felines, its main compound, nepetalactone, has an aphrodisiac and pheromonal effect associated with courtship behavior and is used in cat toys to promote playfulness.



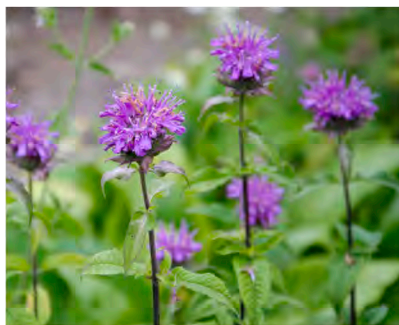
CHAMOMILE (*Chamaemelum nobile*). Bed 406.

Its small dried flower heads are infused to make chamomile tea, well known for its calming properties. Small amounts are sometimes added to herbal tea mixtures providing a mellow flavor and aiding in sleep. The pale blue essential oil, usually obtained from distillation, is used in aromatherapy, shampoos, and cosmetic products, and has also been shown to have antimicrobial properties.



BEE BALM (*Monarda didyma*). Bed 406.

A tea made from the crushed leaves is used to treat mouth and throat infections, as a general stimulant, and to treat headaches and fevers. The Oswego tribe of Native Americans passed along the knowledge of this plant to the new settlers who named it Oswego tea. During the period of the Boston Tea Party, it was drunk in place of black tea.



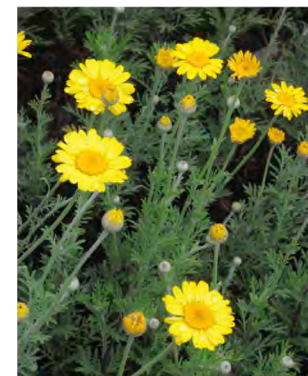
Additional tea plants include woolly yarrow, hybrid rugosa, and raspberry.

HERBS FOR DYE

Plant dyes and pigments have been used worldwide to brighten and decorate furnishings, clothing, and daily objects. In addition, the cosmetic and ritual application of dyes to the hair and body is one of the most basic uses of color. Plants for dye materials can be gathered throughout the year, though the color produced may vary according to the season gathered. In fabrics, some dyes are absorbed naturally by the fibers but the majority require additional treatments with mordants—typically metal salts or in medieval times stale urine or a wood ash solution—to fix the dye, promote absorption, and prevent fading or bleeding of the colors.

GOLDEN MARGUERITE (DYER'S CHAMOMILE)

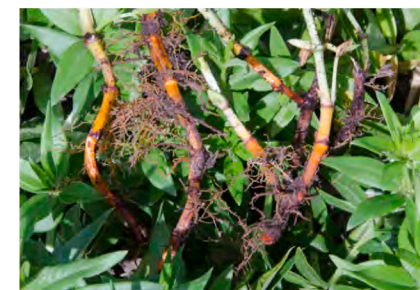
(*Anthemis tinctoria*). Bed 425. The flowers of golden marguerite may be picked regularly throughout the season and dried; leaves are picked when the stems are mature. Both are used to produce the yellow dye, which needs a mordant to color well—alum for yellow and chrome for gold. It was used in Turkey for carpet production before the advent of synthetic dyes.



DYER'S WOAD (*Isatis tinctoria*). Bed 425. Fresh leaves are macerated to extract the blue pigment from dyer's woad. The intensity of the dye color depends on the number of dippings and airings of the fabric rather than the mordants used. Both Julius Caesar and Pliny described how the Britons painted their bodies with blue dye made from woad. The process of fermentation gave off such a foul smell that its production was banned by Queen Elizabeth I within five miles of any of her palaces.

MADDER (*Rubia tinctorum*). Bed 425.

Madder roots are dug up and dried in the autumn. The central part containing the most pigment is then pounded into a powder. Depending on the mordant used, colors will range from brown through purple, orange, and red to scarlet. Madder was the original dye used for the red coats of the British soldiers' uniform and the fox hunting coats of the upper class.



Additional dye plants include weld, calliopsis, and wild indigo.