

Oregano and Marjoram

An Herb Society of America Guide to the Genus *Origanum*



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Introduction

Mission:

The Herb Society of America is dedicated to promoting the knowledge, use and delight of herbs through educational programs, research, and sharing the experience of its members with the community.

Environmental Statement:

The Society is committed to protecting our global environment for the health and well-being of humankind and all growing things. We encourage gardeners to practice environmentally sound horticulture.

Purpose, Scope and Intended Audience:

This guide was designed to provide an overview of the cultivation, chemistry, description, history, folklore and uses of herbal plants in the genus *Origanum*. It was written to accommodate a variety of audiences, providing basic information appropriate for beginners to herbs and herb gardening with supplemental information for intermediate level herb enthusiasts. It can be used in conjunction with HSA's *Herb Study Groups Resource Kit* or as a starting point for those interested in pursuing individual research or developing an herbal presentation/program.

Disclaimer: Information is provided as an educational service. Mention of commercial products does not indicate an endorsement by The Herb Society of America. The Herb Society of America cannot advise, recommend, or prescribe herbs for medicinal use. Please consult a health care provider before pursuing any herbal treatments.

Contributors & Acknowledgements

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Cover photographs (clockwise from top left): *O.* 'Herrenhausen' by Robin Siktberg, *O. xmajoricum* by Susan Belsinger, *O. libanoticum* and *O. onites* from HSA Archives collection.

Description

Origanum is one of over 200 genera in the Lamiaceae (mint family), and the genus includes culinary, fragrant, medicinal and ornamental plants. Herbaceous perennials or subshrubs, origanums are native to the Mediterranean and Eurasia, and grow in mountainous areas with rocky, calcareous soil. Some species grow in mounds that are only 2-3 inches high (104) while others grow erect up to 39 inches tall (102).

All members of the genus have flowers that occur in spikes; for most species these form a panicle with multiple branched stems growing from a central stalk. In *O. onites*, the spikes grow in a “false corymb” (56), forming a convex or flat-topped open inflorescence (102). Corollas may be purple, pink or white depending on the species. In some species flowers are arranged in whorls. The calyx, or small vase-like receptacle that supports and protects the corolla and reproductive organs of the flower, can be bell-shaped or tubular (97) with one or two lips (56). The shape of the calyx is the principal plant character used to distinguish between *Origanum* species

(97). Flower stems can be erect or trailing/cascading (104). Trailing types like the ornamental *O. rotundifolium* and the cultivar ‘Kent Beauty,’ a hybrid of *O. rotundifolium* and another *Origanum* species, have a graceful, drooping appearance. The leaves (15) and flowering parts of the plant contain essential oil glands that secrete volatile oils responsible for the plant’s fragrance (97).



O. rotundifolium with prominent hop-like bracts



Panicate inflorescence of *Origanum vulgare* subsp. *vulgare*

Plants in the genus *Origanum* have bracts, or non-typical leaves, that surround the calyx and corolla. In some instances the bracts are so beautiful and colorful that the casual observer might mistake them for the flower. In these cases, the flower is actually hidden within the bracts. In some species, like *O. rotundifolium* and *O. dictamnus* (dittany of Crete), bracts overlap and resemble hops (92).

Both the stems and leaves of origanums are often covered with fine hairs. Leaves can be of various shapes including round, heart-shaped and oval and may be shiny/waxy or hairy-fuzzy in appearance. Stems may be woody or non-woody. All species also bear tiny brown fruits called nutlets.

Taxonomy

When most people think of oregano, pizza and pasta sauce come to mind. Oregano and marjoram may seem familiar and straightforward to the average cook, but in reality, these common herbs have a very complicated taxonomic history. Although Linnaeus first classified *Origanum* as a single genus, over the

years, plants in the genus have been ordered under various botanical names including *Amaracus*, *Origanum* and *Majorana* (56, 96).

According to Dr. Arthur O. Tucker, “it’s best to think of oregano as a flavor rather than a genus or species” (100). Plants from several genera including *Lippia* and *Plectranthus* are also considered oreganos due primarily to the presence of the chemical carvacrol, which is largely responsible for oregano’s signature scent and flavor. See the Chemistry and Culinary Uses sections of this guide for more information on this topic.

According to current estimates there are 44 species, 6 subspecies, 3 varietates (botanical varieties) (95) and 18 naturally occurring hybrids (60). Because *Origanum* taxa are so variable and cross easily, there are hundreds of unclassified hybrids growing in gardens where close proximity encourages crossing that isn’t likely in the wild (95).

Chemistry

Origanums have long been valued for their culinary, fragrant and medicinal properties. These qualities are the result of naturally occurring chemicals in the plant. One source for these qualities is the volatile or “essential” oil. Other plant metabolic chemical products such as fixed oils and flavonoids also contribute (95). The composition of the essential oil depends on both the genetics of the plant and where it is grown (42, 62). Some species, although beautiful, lack the subjective culinary or fragrance chemistry and are used exclusively as ornamentals.

There are two primary chemicals associated with culinary origanums, carvacrol and sabinene hydrate. Carvacrol is the signature chemical largely responsible for the sharp, pungent oregano flavor of *Origanum vulgare* subsp. *hirtum*, *O. onites*, *O. minutiflorum* and *O. syriacum* (90, 92, 95, 100). Sabinene hydrate is the signature chemical linked to *O. majorana*’s sweet flavor and can occur heavily in its hybrids with *O. vulgare* subspecies (*O. xmajoricum*) (95).

Carvacrol is a creosote-scented phenol with antibacterial and antifungal properties (100, 102). Like all plant chemicals, the amount of carvacrol varies depending on the species, subspecies and growing conditions. According to one report, “extreme water stress” can actually increase the amount of carvacrol (and thymol) in the essential oil of *O. vulgare* (103). Greek oregano, *O. vulgare* subsp. *hirtum*, is valued for its flavor due largely to a high concentration of carvacrol. Some of the other subspecies of *O. vulgare*, including *O. vulgare* subsp. *vulgare*, have little or no carvacrol (102, 103) and do not have the characteristic oregano scent and flavor (102, 104). Because carvacrol is prominent in species from different genera, including *Lippia*, *Plectranthus*, and *Poliomintha*, plants from these other genera are also considered “oreganos” (100, 103). Some of the more widely known include *Lippia graveolens* (Mexican oregano) and *Plectranthus amboinicus* (Cuban oregano).

In addition to carvacrol, the essential oil of some *Origanum* taxa also includes thymol, which produces a thyme-like aroma. Both thymol and carvacrol inhibit the growth of bacteria and may aid food preservation (99). The essential oil of the various *Origanum* species can contain hundreds of additional chemical constituents (95) including linalool, gamma-terpinene, p-cymene and terpinene-4-ol (3, 102), and scents of the different species and subspecies can include hints of lavender, pine and carnation (102). For detailed chemical analysis of the different *Origanum* species, see *The Big Book of Herbs* by Arthur O. Tucker and Thomas DeBaggio.

Nutrition

Of all the *Origanum* species, only *O. vulgare* (subspecies not identified), *O. onites* (pot marjoram), *O. majorana* (sweet marjoram) and *O. dictamnus* (dittany of Crete) are considered GRAS (Generally Recognized as Safe) (107, 108). *O. majorana* leaves are GRAS at concentrations of 1.9 to 9946 ppm, the essential oil from 1 to 40 ppm, and the oleoresin from 37-75 ppm (102). *O. vulgare* leaves are GRAS at 320-2800 ppm (102). Although *O. xmajoricum* isn't on the GRAS list, it is a hybrid of *O. vulgare* and *O. majorana* and has widespread culinary use. *O. dictamnus* is only GRAS as a natural flavoring substance (89, 107).

According to an analysis by the USDA, 1 average teaspoon of dried marjoram has 2 calories, .04 grams of fat, .36 grams carbohydrate, .08 grams protein, .2 grams fiber, 12 mg of calcium, 9 mg of potassium and 48 IU vitamin A, plus small amounts of a variety of other vitamins and minerals. The same quantity of dried oregano is slightly more nutritious with 6 calories, .2 grams protein, .18 grams fat, and 1.16 grams carbohydrate and .8 grams fiber. It also contains 28 mg calcium, 30 mg potassium, and 124 IU vitamin A. (106). In addition to vitamins and minerals, it has been reported that *Origanum vulgare* also includes the flavonoids, galangin and quercetin, which can reduce mutations in the dietary carcinogen Trp-P-2 (102).

Aside from oregano's inherent nutritional value, it may impact overall nutrition by stimulating or curbing appetite, depending on the amount used. A 1997 study showed that adding .27% oregano to pasta sauce increased the amount of food eaten by study participants. Raising the amount to .56% had the opposite effect, reducing food consumption (47 cited in 72). Pregnant women may notice a particular "aversion" to oregano. This could be a natural protection since oregano can be a "mucous membrane irritant" (67) and may stimulate uterine bleeding and cause spontaneous abortion (19 cited in 3). Several sources recommend avoiding "excessive use" of both *O. vulgare* and *O. majorana* during pregnancy for the same reason (19 cited in 3, 26). In addition to pregnancy precautions, some individuals may experience allergic reactions to origanums (3, 72).

History & Folklore

Native to the Mediterranean and Eurasia, *Origanum* species have been cultivated in Egypt for over 3000 years, were used by the ancient Greeks since classical times (92) and have been grown in England since the 13th century (68, 92). Some of the earliest records of *Origanum* use date back to 1600-1200 B.C., when images of the plants were inscribed on tablets by the Hittites of Asia Minor/Syria (61). Some sources claim that oregano traveled to North America with the European colonists (63, 73, 111). Dittany of Crete was introduced to American growers as recently as the 1930s thanks to the efforts of HSA member Mrs. Ellery Sedgwick, who brought a source plant back from a trip to Crete after being inspired by an article about the legendary herb in an early issue of *The Herbarist* (58, 71).

An Herb by Any Other Name...

Sometimes called the "prince of herbs" (60, 98), the name *Origanum* was first used by the ancient Greek physician Hippocrates (460-370 B.C.) (96, 112) and is thought by most authorities to have originated from the Greek words for mountains (*oreos*) and brightness/joy/beauty (*ganeos*) (96, 112). Oregano and marjoram were commonly called "joy of the mountains" due to their beauty and abundance

on the Mediterranean mountainsides, where they grew wild (48, 84, 102).

There are four species that stand out in *Origanum* history and folklore: sweet marjoram (*O. majorana*), wild marjoram/oregano (*O. vulgare*), dittany of Crete (*O. dictamnus*) and Syrian oregano (*O. syriacum*). It is important to note, however, that in much of the history and folklore of the genus it is difficult to distinguish between sweet marjoram and oregano since many authors have used the name marjoram to describe both plants, and historically, both *O. majorana* (sweet marjoram) and *O. vulgare* (wild marjoram/oregano) have been called marjoram (26, 88). The physical similarity of the plants and difficulty with proper identification have been a historical problem (63) that has persisted to recent times, so all history and folklore must carry a disclaimer and be considered in a broad context. That said, in most of the folklore, *Origanum*s have been portrayed in a very positive light, associated with love, protection, purification, healing, and happiness, and steeped in religious tradition and myth.

Love

Sweet marjoram has long been an herb of love. According to Roman legend, the goddess of love, Venus, gave the plant its scent “to remind mortals of her beauty” (9). A similar legend surrounds Aphrodite, Venus’s counterpart in Greek mythology, who is said to have created sweet marjoram and grew it on Mount Olympus (85, 92). Marjoram has been used in love potions and spells (9, 31, 54, 84) and as a wedding herb in nosegays/tussie mussies and bridal bouquets (9, 66, 86). In ancient Greece and Rome a crown of marjoram was worn by the bride and groom during wedding ceremonies (37, 84, 92), a tradition that has also been associated with wild marjoram/oregano (48).

There is more than one folk tradition linking marjoram to love and divinatory dreams. According to one legend, if a woman placed marjoram in her bed before going to sleep, Aphrodite would appear in a dream to “reveal her future spouse’s identity” (25 cited in 92). Marjoram was also one of the herbs used to divine a future spouse in a St. Luke’s Day tradition when combined with marigold flowers, thyme, wormwood, honey and vinegar. If anointed with this mixture before bed, a girl would dream of her future husband (48).

Protection

Both sweet and wild marjoram have been used to protect against evil by being carried, grown in gardens or placed inside a house (31). They have also been enclosed in magical amulets to ward off colds (31), and marjoram was believed to repel witches’ spells, ghosts, goblins and the devil if thrown “over the threshold” of a house (84) or hung over a doorway (88). Wild marjoram/oregano had a reputation for protecting milk during storms, and if combined with wild thyme and placed near milk pails, was believed to prevent the milk from being soured by thunder (48, 80, 84).

Healing

The use of *Origanum* for healing dates back centuries and is recorded in the earliest herbals and natural histories. Early writers like Theophrastus, Mithradates, Pliny, Dioscorides and Galen mentioned them (16, 91), and the plants were praised by the well-known herbalists Parkinson, Culpeper and Gerard.

Gerard, Culpeper and Parkinson all recommended marjoram for a wide variety of conditions, including menstrual irregularity and urinary congestion. According to Culpeper, marjoram was “warming and comfortable in cold Diseases of the Head, Stomach, Sinews and other parts, taken inwardly, or out-

wardly applied” (30). He also suggested it for problems with the stomach, spleen and liver and for ear-aches, swellings and stiff joints.

Gerard recommended sweet marjoram and wild marjoram/oregano for a variety of similar ailments, from colds, toothaches and stomachaches to bruises and swellings. Sweet marjoram could comfort those “given to overmuch sighing,” and wild marjoram could be used externally for scabs and itching, poured into the ear with milk for earache, used for coughing and “against the swooning of the heart” (45). According to Gerard, oregano and wine could remedy the stings of “venomous beasts” as well as opium, hemlock or black poppy poisoning. The reputation of *Origanum* as a poisoning antidote may have originated with Aristotle, who claimed that a tortoise could survive swallowing a snake if it ate oregano (17, 92).

Gerard also discussed dittany of Crete, claiming that it encouraged menstruation, was a “remedie against the stinging of serpents” when drunk with wine, and would ward off serpents with its smell. He believed the Cretan dittany could draw out splinters, expel arrows and aid in wound healing, and reported that goats and deer would eat the plant when “wounded with arrows...shake them out by eating of this plant, and heal their wounds” (45).



Illustration of sweet marjoram from Gerard's *The Herball, or Generall Historie of Plantes*, 1633 edition (HSA Library rare book collection)

Religious References and Myth

Origanum syriacum (Syrian or Lebanese oregano) is considered by most biblical authorities to be one of the plants referred to in the Bible as hyssop (77, 92, 102), particularly in the Old Testament passages (77). It is believed to be the plant used to sprinkle lamb's blood on the Israelites' doorposts during Passover in the account of Exodus 12:22 (77, 102) and to have been used for purification (Leviticus 14:5-52; Psalms 51:7) and sacrificial offerings (Numbers 19:6-18) (77).

Origanums also played a role in ancient, pre-Judaic religions and mythology. In addition to its association with Aphrodite and Venus, marjoram was reportedly worn during rites to the god Osiris in ancient Egypt (84). Dittany of Crete was linked with various goddesses who watched over women during childbirth, including the Cretan mountain goddess Dictinna and the Roman goddess Lucina (84, 91). The Greek goddess Artemis and the Roman goddess Diana were also linked with the plant, and both Artemis and Lucina have reportedly been pictured wearing a crown of dittany of Crete (84, 91).

Amaracus, one of the former names for the genus, has a mythology of its own. According to legend, the king of Cypress once had a servant named Amaracus who was charged with transporting a bottle of valuable perfume for the king. When Amaracus dropped the bottle he died of fright, collapsed into a pool of the perfume, and was transformed by the gods into a sweet-scented *Origanum*. Versions of this legend have been associated with both sweet marjoram (76) and dittany of Crete (26, 84).

Language of Flowers

In the Victorian Language of Flowers, both marjoram and oregano signified joy and happiness (24, 46, 88). In some interpretations, oregano also meant substance (24), and sweet marjoram could symbolize

blushes, “maidenly innocence” (46), consolation, kindness, courtesy and distrust (66).

Magic and Other Folklore

According to magical folklore, dittany of Crete could be “burned to manifest spirits” (31) or enable astral projection (31, 54). Probably because of these properties, it is one of the herbs associated with Samhain (54), a Celtic pagan holiday that is the basis for the secular Halloween. Wild marjoram also has an association with spirits, as it was thought to “help the dead sleep peacefully” (92) if planted on a grave and foretell a happy afterlife if found growing on a grave in Greece (48, 80). Both marjoram and wild marjoram/oregano are also reputed to attract wealth when placed in sachets (31), and marjoram has been used in Sephardic Jewish tradition for healing and to divine the cause of an illness (70).

Culinary History

Sweet marjoram was a popular culinary herb in Europe during the Middle Ages (60) when it was used in cakes, puddings and porridge (72), and records of its culinary use date back to the 1300s in Spain and Italy when it was added to stews and shellfish (8). *O. majorana* was a common salad herb in the 16th century (84) and was used to flavor eggs, rice, meats and fish during the Renaissance (8). Both marjoram and oregano have been used to make teas (9, 38, 48), and prior to the introduction of hops, wild marjoram/oregano was an ingredient in beers and ales (48).

Although oregano has been used in the cuisines of its native countries (60) and was employed since 7th century B.C. to flavor meat, vegetables, fish and wine (61), the herb’s pervasive culinary popularity is somewhat more recent. Oregano has been grown in America since colonial times (28, 85) but was not in widespread use in the U.S. until the end of WWII, when American GIs returned from Europe with a taste for pizza and Italian sauces (92, 99).

Dittany of Crete has had more limited culinary use, but the flowers and bracts were reportedly used to make tea, and the plant was combined with garlic, parsley, thyme, salt and pepper in a Saxon fish sauce (58).

Other Historic Uses

Origanums have historically been used for hygiene, fragrance and cleaning. The Egyptians used oregano as a disinfectant, preservative and medicine (17). Marjoram was combined with oregano, rosemary and lavender by the Romans in linen and bath sachets (9), and sachets of dried *Origanum* were used to protect stored clothes from moths and other insects (84). According to Culpeper, “Marjoram is much used in all odiferous Waters, Pouders, etc., that are used for Ornament or delight” (30), and Parkinson recommended marjoram, which he called sweete marierome, for use in nosegays, sweet bags and sweet washing waters (83). Gerard described sweet marjoram as “of a most pleasant taste and aromatical smell” and recommended the leaves as “excellent good to be put into all odiferous ointments, waters, powders, broths, and meats” (45). Marjoram was used to polish furniture and floors in Europe (17, 48) and was listed as one of Tusser’s strewing herbs (48, 80) scattered over floors to freshen, disinfect and ward off disease (85), although it isn’t completely clear whether the plant in question was sweet or wild marjoram.

Marjoram (*Origanum* sp.) was also grown in English knot gardens as bee and butterfly plants in the Tudor and Stewart periods (84), and was planted in mazes during the 16th century (80).

Origanum Today

Today, oregano is the “largest selling” culinary herb (60). Americans consume 379,000 metric tons of oregano per year, the majority of which (63%) is imported (81). (Statistics also include *Lippia* species.) Increases in consumption in recent years may be due in part to popularity of low-fat, low-salt diets, which rely more on seasonings (81). See the Uses section of this guide for other contemporary uses.

Did you know?

Oregano lends its name to an obscure computer programming language.

Literature & Art

For as long as there has been recorded literature, there have been references to the origanums. One of its earliest literary appearances is in Aristophanes’s *Women in Power* (393 B.C.): “Then first strew me some origanum underneath, and break off and place under four vine-twigs, and wear a taenia, and place beside you the vases, and set down the earthen vessel of water before your door” (5).

There are many references to marjoram in the classics. It appeared in the 1st century B.C. poem *Epi-thalamion* by Catullus, was mentioned by Shakespeare as well as English poets Edmund Spenser (16th century) and Michael Drayton (16-17th century), and 19th century authors Oscar Wilde and Robert Browning.

Shakespeare included marjoram in *The Winter’s Tale* and *All’s Well that End’s Well*: “Indeed, sir, she was the sweet-marjoram of the salad, or, rather the herb of grace” (Act IV, Scene V). It was also referenced in *Sonnet 99*: “The lily I condemned for thy hand,/And buds of marjoram had stol’n thy hair,” and played a role in *King Lear*, when Edgar must give the password “sweet marjoram” to be dispatched by Lear (Act IV, Scene VI) (29).

Michael Drayton, a contemporary of Shakespeare, made reference to marjoram as a strewing herb in his poem, *Muse’s Elysium*:

... Germander, Marjoram and Thyme,
Which uses are for strewing,
With Hyssop as an herb most prime,
Here in my wreath bestowing. (86)

The anonymous English/Scottish ballad *Lady Alice* includes a bittersweet sentiment: “And bury me in Saint Mary’s church/All for my love so true,/And make for me a garland of marjoram,/And of lemon-thyme, and rue.” (21)

Although literary references to dittany of Crete are more limited, it did play a noteworthy role in Virgil’s *Aenied*, when the goddess Venus uses the herb to extract an arrow from Aeneas and heal his wound:

A branch of healing dittany she brought,
Which in the Cretan fields with care she sought...

This Venus brings, in clouds involved, and brews
Th' extracted liquor with ambrosian dews,
And odorous panacee...
The steel, but scarcely touched with tender hands,
Moves up, and follows of its own accord,
And health and vigor are at once restor'd. – source: *The Aeneid*, Book 12 (110)

Most explicit references to oregano are more recent, probably because any early works would have used the name marjoram. Oregano is mentioned by a variety of 20th century poets and playwrights, the most famous being the Chilean Nobel Laureate Pablo Neruda whose *Love Sonnet XXXIV* opens with a reference to oregano (79).

Although *Origanum* illustrations have been featured in various herbals, including Gerard's, portrayals of origanums in art are scarce and not well documented. Some sources claim that the goddesses Artemis (91) and Lucina (84) have been pictured wearing a crown of dittany of Crete, but the specific artworks have not been identified. The earliest known image of *Origanum dictamnus* appeared in a 1500 B.C. fresco that was discovered in the ruins of a Minoan palace near the ancient Cretan city of Knossos (20, 58, 92). According to one source, dittany's role in *The Aeneid* was illustrated in a Pompeian wall painting that portrayed Venus bringing the healing plant to Aeneas's physician (58). A color painting of dittany of Crete was also allegedly included in a second century A.D. papyrus found at Umm el Baragat (27).

The role of *Origanum* isn't limited to the visual and literary arts. Oregano also appears in a composition by jazz musician Art Pepper titled *Art's Oregano*.

Cultivation

Growing origanums may seem intimidating at first, since growth requirements and hardiness vary among species and subspecies (105), but if you start with one or two plants and follow a few basic guidelines, cultivation can be easy, low-maintenance and rewarding. In this section, HSA's expert growers will show you how.

Propagation

Origanum species can be grown from seed, cuttings, division or layering, and the best method will depend on the plant's growth habit and variability. Susan Belsinger's rule of thumb is to "take the lead from the plant" (7). In general, she takes cuttings for upright plants, layers the sprawling types and divides if plants get very large. According to Susan, "If you have a really sprawling one it almost self-layers. It's so easy all you need to do is take a branch, put a little soil on it and put a rock on top" (7). Susan recommends layering for *O. xmajoricum*, *O. onites* and *O. vulgare* subsp. *hirtum*, which though erect, will easily "flop over" and spread. Because *O. majorana* and *O. dictamnus* are upright, Susan grows them from cuttings. She also propagates *O. xmajoricum*, *O. onites* and *O. vulgare* by division. After dividing, *O. xmajoricum* plants can be placed in 4-inch pots (11). Scott Kresge propagates the plants in his HSA-registered *Origanum* collection from cuttings, but also divides the larger clump-forming varieties in his garden (64). Division can also be a means of pruning. See the Pruning & Harvesting section for details.

To propagate sweet marjoram and *O. xmajoricum* from cuttings, Tina Marie Wilcox suggests cutting about 8 inches down the stem, 2-3 nodes from the top so that the base of the cutting is in the semi-hard woody portion of the stem, and nipping off the weak uppermost inch or two of the stem tip. New branches will grow from the nodes (114). Rae McKimm recommends taking cuttings from a semi-ripe portion of the stem since “new green growth will rot easily, and woody material takes longer to strike roots and results in a leggier plant” (75). Cuttings can be taken in late spring (16) or summer (109). *O. xmajoricum* can be rooted in sand, water or a mix of sand, peat and perlite (11), and Francesco DeBaggio roots all of his cuttings in a peat-based soilless mix (32). Madalene Hill, Gwen Barclay and Henry Flowers prefer to propagate their *Origanum* plants from cuttings because it is easy and preserves the plant’s genetic characteristics (52). Francesco DeBaggio points out that propagating from cuttings is particularly useful for culinary origanums to preserve flavor (32).

Growing from seed can be a tricky proposition for many of the more variable *Origanum* species. If grown from seed, the resultant plant will often lack the desired scent and flavor due to genetic variation and crossing. Rex Talbert recommends propagation methods like division and cuttings that clone the source plant’s chemistry and form and preserve its aroma and flavor (95). Growing from seed is a last resort for Madalene Hill, and she will only use this method if seed is all that is available (51).

Madalene Hill and Gwen Barclay caution against planting seeds directly in the ground because they may be washed away by rain or eaten by birds (51). If you do decide to take your chances and propagate from seed, your best bet is to start in flats. In their book, *The Big Book of Herbs*, Arthur O. Tucker and Thomas DeBaggio suggest sowing both oregano and marjoram uncovered (102), but Carol Morse, who helps maintain an HSA-registered *Origanum* collection in northern California, likes to “sprinkle small pinches of seeds on lightly tamped, slightly moist soil” and “barely cover the seeds with ground vermiculite and water with a mister to get it evenly wet” (78). She prefers topping with vermiculite to hold moisture. Marjoram will generally germinate in 5 days and oregano in 4 at a temperature of 70°F (102), but Carol Morse finds that in her northern California greenhouse, where nighttime temperatures can drop to the 30s and 40s, germination may take up to a month. Francesco DeBaggio and Tina Marie Wilcox propagate *O. majorana* from seed, and this species is the only *Origanum* Francesco grows from seed because it will generally come true. He has found that seed from seed catalogs is more reliable for *O. majorana* than the other *Origanum* species, but cautions that although the species can be grown from seed, any named cultivars should be grown from cuttings (32).

In March, Tina Marie sows 1-2 seeds per cell and uses a heat mat to encourage germination. When the plants have germinated, she removes the weaker one, leaving one plant per cell. When it has 2-3 true leaves she moves it to a 4½-6-inch pot before transplanting into the ground (114). Rae McKimm starts her seeds in January using fluorescent lights on a timer, 16 hours on and 8 hours off (75). For starting seed, Francesco DeBaggio recommends a soilless peat-based growing medium (32).

Beginners may want to start by purchasing a young plant. Because origanums are so variable and are often mislabeled by nurseries and retail outlets, many of HSA’s *Origanum* experts recommend smelling a culinary oregano or marjoram before you buy it (7, 51, 95, 114). Plants may be labeled oregano and actually be an ornamental subspecies of *O. vulgare* rather than a culinary type like *O. vulgare* subsp. *hirtum*. For *O. xmajoricum*, matters are even more complicated. *O. xmajoricum* is a hybrid of *O. vulgare* subsp. *virens* and *O. majorana*, but since the rules of nomenclature require that the subspecies is not specified in the cross, a plant labeled *O. xmajoricum* may actually have a parent that is a different subspecies of *O. vulgare* and may not have the characteristic scent and flavor (95). According to Rex Talbert, unless *O. xmajoricum* is grown from cuttings, genetic variation can occur that may produce a

culinarily flavorless plant, even if the plant's parents are *O. majorana* and *O. vulgare* subsp. *virens* (95). Interestingly, although *O. vulgare* subsp. *virens* is recorded as the subspecies of *O. vulgare* involved in the originally authored cross, the subspecies itself is not generally used as a condiment (102).

In the South, fall is a good time to buy plants for transplanting outdoors (51). Susan Belsinger and Tina Marie Wilcox suggest looking for *O. xmajoricum* as Italian oregano or the cultivar 'Hilltop' and to taste the plant before purchasing. According to Tina and Susan, the leaf "should tingle on your tongue with the familiar spicy pungency of oregano, yet the sweetness should round out the spice, and it should be only very mildly hot" (11).

For beginners, the majority of HSA's experts recommend *O. vulgare* subsp. *hirtum* (1, 7, 75, 95, 101), *O. xmajoricum* (7, 32, 51, 95) and *O. majorana* (7). Scott Kresge finds that *O. vulgare* subsp. *hirtum* is "the most tolerant of extreme conditions" (64). Dr. Arthur O. Tucker considers this species the best for outdoor culture for the home gardener because it is hardy in most North American gardens and has a flavor that works well for pizza and other foods that call for oregano (101). *O. xmajoricum* is another favorite that Francesco DeBaggio recommends for its mild pungency and excellent flavor (32). Likely due to a trait inherited from its parent *O. vulgare* subsp. *virens*, *O. xmajoricum* is hardier than *O. majorana* and can be a good plant for many novice gardeners.

OUTDOOR CULTIVATION

Origanum plants are perennials or subshrubs with hardiness ranging from Zone 5 to Zone 9 depending on species/subspecies. Many are tender and are grown as annuals in North America or are grown in pots and overwintered indoors (102). *Origanums* grow so easily that some species, like *O. vulgare*, if left unchecked, may become invasive and spread like weeds. See the Species Highlights section for more information on habit, growth form and hardiness.

Soil

Origanums can grow in a variety of soils and climates (85, 116) but thrive in dry, rocky conditions that mimic their native habitat. They prefer well-drained to dry (16), sandy (33, 75), gravelly loam (102) with a neutral to alkaline pH (16, 85), about 6.9 for *O. majorana* and 6.7 for *O. vulgare* subsp. *vulgare* (102). Wood ashes or dolomitic limestone can be used to reduce acidity (85). Good air circulation/aeration is also essential (104).



Origanum bed with Mediterranean mulch
Photo by Susan Belsinger

Raised beds can be helpful for aiding drainage and preventing weed growth (116). Susan Belsinger and Tina Marie Wilcox have an easy and economical method for creating a raised bed. Simply dig paths around and through the garden, shoveling the soil from the paths to create the beds as you dig (116). Francesco DeBaggio recommends raising the planting bed 6-12 inches or planting each plant on its own mound to promote drainage. He also suggests light colored gravel if your climate is humid. He doesn't recommend standard organic mulch because it holds too much humidity around the foliage (32). Barbara Varland, who maintains an HSA-registered *Origanum* collection in Cincinnati (zone 6) plants in raised beds to overcome heavy clay soil and uses a combination of soilless mix, sand, compost and chicken grit topped with a pea gravel mulch for all of her *Origanum* plants (109). Susan Belsinger and Tina Marie

Wilcox recommend using ground rocks, shells or greensand, plus builder's sand and a mixture of compost, fish meal, blood meal, and/or worm castings to provide a healthy root foundation (116).

Planting

Before transplanting, plants that have been started indoors should be hardened off in a cold-frame for about a week to acclimate them to the outdoors (32, 102). (See Propagation section for information on starting plants.) They can be transplanted into the ground after the last chance of frost (32). Winter-hardy perennials can be planted in spring, summer or fall, depending on when the ground freezes (7, 95).

The required spacing between plants will vary depending on the species and growth habit. Art Tucker and Thomas DeBaggio recommend spacing *O. majorana* plants 6-12 inches apart for home gardens (102), and according to Francesco DeBaggio, 6-10 inch spacing will work for most species (32). Tina Marie Wilcox spaces sweet marjoram 1½ feet apart, and Henry Flowers recommends 1½-2 foot spacing for *O. xmajoricum* unless planting in a border or hedge, in which case spacing can be closer (51, 114). Gwen Barclay reminds gardeners that the spreading, low-growing origanums will fill in regardless of how they are spaced at planting, and make great groundcovers for this reason (51).

Light

Origanums can be grown in full sun or partial shade but will have improved scent and flower color with at least ½ day of full sun (104), but Carol Morse, who gardens in Zone 9, finds that marjoram (*O. majorana*) prefers light shade on very hot, windy days (78), and one source suggests north-facing rock garden slopes for species with hop-like blooms (112). Morse has also had success growing *O. vulgare* subsp. *hirtum*, and the cultivars *O. vulgare* subsp. *vulgare* 'Humile,' *O.* 'Marshall's Memory,' *O.* 'Kent Beauty' and *O.* 'Santa Cruz' in morning sun.

Water

For the genus *Origanum*, proper drainage is more of a concern than watering. Plants can tolerate moist to dry conditions, and established plants are drought tolerant (102). All origanums prefer well-drained soil, but some require sharper drainage than others. Drainage is particularly important for *O. dictamnus* (51, 105), *O. microphyllum* and *O. rotundifolium* (51). Humidity is also a concern, and origanums generally dislike high humidity (104). Low humidity is crucial for hairy-leaved plants like *O. dictamnus* (95, 101, 105), which can be grown to zone 7 if the air is dry enough (105). According to Dr. Arthur O. Tucker, "*Origanum dictamnus* is even hardy to Denver, I understand, because the summers and winters are dry, but I cannot get it through a Delaware winter because of the excessive moisture" (101). Holders of HSA-registered *Origanum* collections, Carol Morse and Richard Dennis, suggest minimal watering. Tina Marie Wilcox, who gardens at the Ozark Folk Center in Arkansas, doesn't water her outdoor origanums at all and grows them on mountain ridges for good drainage (114). According to Rae McKimm, "supplemental watering is needed only during extremely dry conditions – then water slowly and deeply" (75). For containers, McKimm suggests watering well and deeply and waiting until the soil is almost completely dry before watering again. For Scott Kresge, *O. vulgare* and its subspecies are most tolerant of wet conditions (64).

Fertilizer

Most *Origanum* will thrive with minimal fertilizer if planted in soil amended with gravel, shells, sand and compost, and proper soil amendments are especially critical for container-grown plants. According to Madalene Hill and Gwen Barclay, most plants grown in containers in the South, including herbs, require regular fertilization because of the excessive amount of water required during hot summers. Weekly or biweekly applications of half-strength fertilizer may be required (51). Scott Kresge waters his container plants with manure tea in the summer and top-dresses his in-ground *Origanum* with compost made from plant material, leaves and horse manure (64). Fish meal, blood meal and worm castings are other possible organic additions (116). At the National Herb Garden, James Adams amends ground plantings with compost once or twice a year (1). Susan Belsinger recommends foliar feeding with kelp, fish emulsion or compost tea when transplanting and once a month during the summer. She sprays plants early in the morning or late in the day so that the sun does not evaporate the solution (7). Tina Marie Wilcox feeds plants up to twice a month during the active growing season, but discontinues in September to ensure the plants a healthy winter (114). Francesco DeBaggio recommends granular or liquid organic fertilizers and suggests light fertilizing to prevent rapid, soft growth that becomes disease prone (32). Disease isn't the only reason to go easy on the fertilizer. According to Henry Flowers, plants given too much nitrogen will be rangy and less flavorful (51).

Containers

Most *Origanum* plants can be grown in containers, for hardiness, appearance, and convenience or to control the more aggressive types. Susan Belsinger, who gardens in Zone 7, grows some of the more tender species like *O. majorana* and *O. dictamnus* in pots that can be brought inside in October and returned outdoors in late April or early May after the danger of frost has passed. She starts plants in 2-4-inch pots and eventually moves to 8-inch pots. Even if the plant will be staying in the same size pot, it is important to trim the roots and change the soil annually or at least every 2-3 years. Susan grows *O. rotundifolium* hybrid 'Kent Beauty' in hanging baskets for its beauty as an ornamental (7).

Gwen Barclay recommends container growing to beginners because it allows plants to be moved for optimum sun exposure and to protect from excess water/rain. This is especially important for gray-leaved and smaller-growing plants that require more drainage, like *O. microphyllum*, *O. dictamnus* and *O. rotundifolium*. Henry Flowers recommends a porous container like terra cotta for proper drainage, using a 6-inch pot for smaller types and a 20-24-inch pot for *O. xmajoricum* and *O. vulgare*. *Origanum* can also be planted in whiskey barrels where upright habit plants like *O. xmajoricum* can be grown with other herbs and vegetables. Madalene Hill and Gwen Barclay like to grow the culinary *Origanum* with tomatoes or chili peppers, rosemary, parsley and chives, planting 5 to 7 plants per barrel (51). Richard Dennis recommends 'Kent Beauty,' 'Santa Cruz' and *O. libanoticum* for container growing (34).

Tina Marie Wilcox recommends all *Origanum* species for container growing, but for different reasons: "The showy ones look nice in containers; the tender ones are happy in containers" and the more invasive types can be controlled with container culture. She prefers to grow *O. vulgare* in a 7-inch hanging basket where it can cascade over the side but be prevented from spreading across the garden (114). Scott Kresge suggests container growing for species that are difficult to grow and susceptible to being wet (64). Pot marjoram (*O. onites*) is a tender perennial that must be grown in terra-cotta pots and requires "cool, near freezing temperatures over winter" (102). Carol Morse likes to grow *O. vulgare* subsp. *hirtum* in 2-gallon herb bowls with thyme and rosemary since they all grow roots at the same rate. She keeps hers near her kitchen door and finds the plants will last about 3 years grown this way

(78). Rex Talbert has had the same plants for 10 years (95), and according to Tina Marie Wilcox, *O. xmajoricum* “will last forever if repotted, divided and root pruned” (114). Containers are also a good way to showcase diminutive plants like *O. microphyllum*, *O. ‘Kaliteri’* and *O. sipyleum*, and plants with showy blooms such as *O. ‘Kent Beauty,’* *O. ‘Barbara Tingey,’* and *O. dictamnus* (109).

Container plants have special requirements for soil, fertilizer and water. When growing in containers, Susan Belsinger and Tina Marie Wilcox use an aggregate mix of oyster shell, activated charcoal, greensand and granite meal; a meal mix of fish meal, bone meal and kelp; and a mulch of crushed oyster shell, greensand, activated charcoal, coarse sand, granite or rock dust and lava rock (116). See the Water and Fertilizer sections for additional information.

INDOOR GROWING

Disclaimer: The Herb Society of America would like to encourage gardeners to cultivate plants appropriate to their region and season. We realize, however, that opinions on the appropriateness of indoor growing vary, and indoor cultivation is the only way that some herb enthusiasts will be able to grow fresh oregano and marjoram.

Most of HSA’s *Origanum* experts don’t grow origanums indoors except to start seeds/plants or as a last resort. Rex Talbert prefers outdoor growing, but has grown *Origanum* plants in ceramic chimney flues in a tiered arrangement on occasion (95).

Carol Morse grows Greek oregano (*O. vulgare* subsp. *hirtum*), *O. vulgare* subsp. *vulgare* ‘Humile’ and sweet marjoram indoors in individual 6-inch pots and finds that although the plants don’t become dormant they do slow down significantly in the winter and require less food and water during this time. During other parts of the year, indoor plants require additional water and food. Although high humidity can be a problem for outdoor origanums, for Carol, the excessively low humidity caused by air conditioning and heating can be trouble for indoor plants, and she recommends keeping plants in the kitchen, away from vents (78).

Although outdoor *Origanum* ground plantings can thrive with minimal fertilizer, indoor, container-grown plants require additional fertilization. Scott Kresge supplements with ¼-½ strength fertilizer every other watering, and he waters greenhouse plants 1-2 times per week in spring and fall and every week or two in winter using a dosatron (64). According to Francesco DeBaggio, although origanums need aeration year round, proper air circulation is even more crucial during the winter, and he recommends keeping the roots and foliage as dry as possible without letting the plants wilt (32). Division is also essential for many indoor plants. See the Pruning & Harvesting section for information.

Some tender perennial species like *O. majorana*, *O. onites* and *O. dictamnus* may need to be overwintered indoors even if they are grown part of the year as outdoor container plants (114). Barbara Varland overwinters her tender perennial species indoors under lights (109), but Rex Talbert houses sweet marjoram outdoors in a cold frame during the colder months (95). According to Madalene Hill and Gwen Barclay, moving tender herbs in containers to an unheated porch will usually offer enough protection in the South. Although plants can be brought into the house or garage during periods of very low temperatures, in general, herbs don’t thrive indoors in their region (51). No matter where you garden, even if you start seed and overwinter indoors, most plants will be more robust if moved outside as the weather permits.

Pests & Diseases

Although pests and diseases are not a common problem for *Origanum* species, there are some to watch out for. *Origanum* plants are susceptible to a variety of fungal diseases. Rust fungi (*Puccinia* sp.) (56) causes circular spots on the leaves, and the cultivars 'White Anniversary' and 'Dr. Ietswaart' are most susceptible (95). *Origanum vulgare* can fall prey to *Fusarium oxysporum*, *F. solani* (102) and alpha mosaic virus (103). Other fungi that may afflict *Origanum* plants include *Botrytis* spp., *Phytophthora* and *Pythium* (32), which can cause damping off and various forms of rot (40).

Care and propagation method impact disease resistance. Arthur Tucker and Tom DeBaggio report that *O. majorana* is less vulnerable to root and stem diseases if grown from cuttings (102), and Rae McKimm finds that container-grown plants are more susceptible to fungal infections (75). To thwart fungal attacks, avoid over-watering and make sure plants have proper air circulation. Pruning and dividing can improve air circulation (1, 32), and moving plants to a sunnier location can also help (1).

If your plant does succumb to a fungal disease, Susan Belsinger suggests removing and discarding the diseased plants or plant parts. Do not add them to the compost pile where the fungus can survive (7). According to Madalene Hill and Gwen Barclay, infected soil should also be removed (51).

Although pests may infest the garden, they are more of a problem indoors and in the greenhouse. White fly, aphids, mealy bugs and red spider mite may attack greenhouse plants (7, 114). Susan Belsinger recommends spraying them off with water or chili-garlic soap spray the day before moving plants indoors for the winter (7). In the garden, spit bugs may infest plants and lead to soggy foliage and mildew. Tina Marie Wilcox uses organic controls including strong streams of water, Neem seed oil, Safers soap and a few drops of essential oil of cinnamon as an insect repellent (114). Fourlined plant bug can cause dark spots on the leaves of *O. xmajoricum* in the spring but can be combated by applying rotenone and removing affected leaves (11).

Although the above list of potential threats may seem overwhelming, most gardeners should experience few problems if a few simple precautions are taken. The best protection against pests and diseases is proper growing conditions, including using sterile potting medium, keeping plants well-aerated and avoiding excessive watering.

Pruning & Harvesting

There are several reasons to prune *Origanum* plants: for appearance, for the health of the plant and to make room in the garden. The added benefit of pruning is that it can be a way to harvest and enjoy the culinary origanums throughout the growing season.

Plant tips should be pruned when transplanting to stimulate new growth. For plants with an upright growth habit like *O. xmajoricum*, Henry Flowers suggests cutting back to a rounded shape 2-3 times a year. For *O. xmajoricum*, it is necessary to uncurl soft growth in order to prune. In February in the South, Madalene Hill and Gwen Barclay remove dead wood and winter damage "as you would for roses." Madalene points out that it is even necessary to prune groundcover origanums if they become too aggressive (51).

Francesco DeBaggio prunes his potted *Origanum* plants aggressively in spring and summer, cutting small plants down to 2-3 inches high and larger woodier ones just above the wood or approximately 5-6 inches. Aggressive pruning improves air circulation and prevents disease. He prunes moderately to lightly in early fall to remove weak, spindly growth, to encourage branching and additional growth, or to harvest a few sprigs for use in the kitchen (32).

Remember that the leaves and aerial portions are not the only part of the plant that must be pruned. The roots should also be trimmed. This is particularly important if growing *origanums* in containers, but also applies to garden plants. According to Tina Marie Wilcox, for *O. xmajoricum*, it's important to divide plants and remove old, dead roots every few years even if the plant is in the ground. The middle of the patch dies out because the roots fill up the space and consume the humus, preventing the plant from absorbing nutrients (114). For optimum health, aggressive or clump-forming indoor- and container-grown plants require annual division, and Carol Morse recommends dividing indoor-cultivated Greek oregano and 'Humile' yearly (78). Madalene Hill and Gwen Barclay caution against pruning roots in hot climates except during the coolest time of the year, November through early February, when most plants are dormant (51).

For ornamentals, deadhead flowers to encourage new buds and lengthen bloom time (115). Deadheading before flowers go to seed is also important to prevent spreading/crossing in the garden (33).

Origanums should be harvested just before flowering (7, 75, 78, 85, 109, 114), but waiting for the buds to form will maximize the essential oils present in the plant (103, 115). Rex Talbert points out, however, that these differences may not be obvious and a larger quantity of oil does not mean that it is of higher quality (95). If harvesting the flowers for dried arrangements, harvest while in fullest bloom (1).

For culinary *origanums*, expect at least two major harvests per season. Susan Belsinger cuts back her culinary *origanums* from $\frac{1}{3}$ - $\frac{1}{2}$ before blooming and then cuts plants almost all the way back in the fall (7). Tina Marie Wilcox harvests *O. xmajoricum* down to the ground 2 times per year when coming into bud and tip harvests sweet marjoram as often as every 2 weeks (114). Remember that tips can be harvested throughout the growing season.

Preserving & Storing

Drying

Oregano and marjoram are ideal for drying because they retain their flavor better than many other dried herbs (51). Although drying does cause the loss of some essential oils, Susan Belsinger loves *O. xmajoricum* dried almost better than fresh and raves that it "smells heavenly and makes you want to cook" (7).

Origanums can be dried on screens, trays, in drying baskets or hung in bunches from the ceiling in a warm, dry area (1, 7, 75, 109). Rae McKimm hangs her *origanums* in the attic, and Barbara Varland uses her garage. Jim Adams dries by attaching herb bundles to hangers using rubber bands. If the humidity is low, Francesco DeBaggio simply dries them on a paper towel in the open air (32). Rae McKimm suggests stirring the herbs to ensure even drying. If you live in a humid area, Susan and Francesco recommend finishing in the oven on a cookie sheet. Place whole, intact stems in an oven that has been heated to 150-200°F and then turned off (7). Leave the oven door open to avoid cooking the leaves (32). Your

Origanum will be dried when the leaves are crisp and stems do not bend (7).

Madalene Hill and Gwen Barclay dry their herbs piled loosely on a tray in an air-conditioned room; the stiff stems separate the softer foliage and allow much faster drying. They prefer not to oven or microwave-dry culinary origanums to avoid the loss of essential oils that may occur at prolonged exposure to high temperatures. Using this method, the smaller-leaved species like sweet marjoram (*O. majorana*) should dry in 3-4 days (51).

Tina Marie Wilcox uses more unorthodox drying methods. Her favorite is the refrigerator drying technique. A frost-free refrigerator can dehydrate any of the origanums in a couple of weeks. Place herbs in a thin layer in an open paper bag laid on its side. She prefers this method to retain color, flavor and essential oils. Tina also can dry her herbs in a paper bag, and the heat of the car mimics a drying oven (114). For optimum flavor, *O. majorana* can be convection dried at 113°F, and blanching before drying will preserve the green color of the leaves but will decrease essential oil content (102).

Whichever method you use, after herbs are dried, remove the leaves by sliding your finger down each stem (7). Broken stems must be removed before using (51). After drying, store the leaves in glass jars in a dark, dry area. Or, if you will be using them quickly, follow Carol Morse's lead and hang in bunches in the kitchen "for that extra garnish" (78).

Remember that origanums can be dried for flower arrangements as well as culinary use. If drying for arrangements, dry on trays or hung bunches (78), but don't strip the leaves. For dried arrangements Carol Morse prefers Greek oregano (*O. vulgare* subsp. *hirtum*), and the cultivars 'Marshall's Memory,' 'Hopley's Purple,' 'Santa Cruz' and 'Kent Beauty.'

Frozen Oil Concentrates

For taste and convenience, Madalene Hill and Gwen Barclay prefer frozen oil concentrates to other preservation methods. To make an oil concentrate, blend 2 cups firmly packed fresh marjoram leaves, tender stems and tips with ½ cup vegetable or olive oil in a food processor. Freeze in a frost-free freezer in freezer-rated plastic or glass containers. Frozen oil concentrates will keep at least 1 year, but be sure to keep frozen to prevent botulism (51).

Other Preservation and Storage Methods

Susan Belsinger makes Southwestern vinegar with oregano, marjoram, chile peppers and garlic in apple cider vinegar or rice wine (7). *Origanum* sprigs can also be layered in salt in sterilized pint jars, and fresh stems will keep for a few days in the refrigerator in plastic bags (82, 85). Madalene Hill and Gwen Barclay suggest wrapping sprigs in paper towels and placing in tightly closed plastic bags in the hydrator (crisper) section. Origanums will also keep for several days in a glass of water on a countertop as long as the leaves are not submerged (52).

Uses

Some *Origanum* species are valued for their taste and aroma, others for their medicinal properties and economic value, while yet others are prized for their beauty as ornamentals. Many species have multiple uses. If there is an herbal use, there is probably an *Origanum* to fill it. This section provides an overview of the myriad uses of this multifunctional genus.

CULINARY USES

Even the most inexperienced cooks know that oregano is one of the key ingredients in pizza and pasta sauce, and sweet marjoram is a signature poultry-stuffing herb. “The heart and soul of Mediterranean cuisine” (7), *Origanum* plants are essential components in Italian, Greek and French cooking. Although oregano and sweet marjoram are staples for many cooks, the culinary use of *Origanum* isn’t limited to a few foods or species of plants. *Origanum* plants are very versatile (51) and there are many different culinary species with an array of distinct flavors and uses.

Origanum majorana (sweet marjoram)

“Of all herbal fragrances there is none to my mind more pleasant than that of sweet marjoram, of that plant which the French call “Marjollaine à Coquille” and put with keepsakes and add to salads.” – Henry Beston, *Herbs and the Earth* (13)

As its common name implies, sweet marjoram is the mildest and sweetest of the culinary *Origanum* species. Susan Belsinger describes the flavor as “honeyed,” similar to sweet broom with “a tiny little bit of mint... slightly floral... [with] a touch of citrus and a hint of clove” (7). Madalene Hill and Gwen Barclay call it “balanced, warm, comfortable and homey like chicken and dumplings or turkey and dressing” (51).

Sweet marjoram has a wide variety of culinary uses. It can flavor liqueurs and beers (35, 39) and is one of the herbs in the infamous traditional absinthe (23). It can be used in herbal vinegars (13), and with a variety of meats and vegetable dishes. Leaves, flowers and tender stems can be added to stews, poultry, stuffing, syrups, dressings, cheese mixtures for sauces and spreads, seafood, omelets, pizza, salads and sausages (38, 51, 92) and tea can be made from the leaves (38). Sweet marjoram complements mushrooms, carrots, cauliflower, spinach, squash, peas and asparagus (72, 92). It combines well with other herbs and spices including oregano (7), garlic, parsley, thyme, bay leaves, black pepper, chives, horseradish and nutmeg (72).

With its sweetness, *O. majorana* is a natural addition to desserts. If you lived in the 16th century, you may have been treated to sugar flavored and scented with marjoram flowers (84). Scott Kresge recommends sweet marjoram for crème brûlée, ice cream, custards, pies/tarts and other fruit desserts. According to Scott, the herb complements apples, melons and tropical fruits like papaya and mango (64).

Commercially, sweet marjoram is an ingredient in many processed foods. The seeds are used in meat products, candy, beverages and condiments (38, 92), and the essential oil/oleoresin flavors sauces, preserves, soups, meats, frozen desserts, baked goods and snack foods (69, 92), but remember that marjoram essential oil is only GRAS at 1-40 ppm (102) and shouldn’t be used by home cooks.

Origanum vulgare subspecies and cultivars (oregano)

While marjoram's primary flavor is sweet and mild, oregano's is spicy and strong. Fresh oregano has a spicy aroma reminiscent of clove and balsam, and the dried herb has a pungent flavor with notes of peppermint, pine and clove (9). Oregano is traditionally used in Italian, Greek and Mexican dishes (16). Flowering tops are used in beers and ales, and fresh and dried leaves can be added to soups, casseroles, sauces, stew, stuffing, eggs, olives, teas, tomato-based dishes (38) and strong-flavored foods like chili (16) and pizza (92). Flowers have a spicy flavor similar to the leaves and can add a flavorful and decorative touch to vegetables, salads and other foods (7). Oregano complements cabbage, kale, chard, tomatoes, mushrooms, zucchini, broccoli, beans, tomatoes, peppers, onions, aubergine, potatoes (72), eggplant (92), cucumber (95) and a variety of meats, poultry and seafood (92). Madalene Hill and Gwen Barclay suggest tying small branches together to make a meat-basting brush (53). Oregano can be combined with black pepper, parsley, marjoram, capers, thyme, sage, rosemary, basil, garlic, coriander and cayenne pepper (72), and fresh leaves can enliven cream sauces, eggs and cheese dishes (85). Like sweet marjoram, oregano can also be added to liqueurs (35) and was reportedly a component of absinthe (23). Both oregano and marjoram can be used as salt substitutes (114). Commercially, the oil and/or oleoresin are used to flavor alcoholic beverages and processed foods (89) including baked goods, meats, condiments, vegetables, snack foods, fats and oils (72). When converting for recipes, the ratio of fresh to dried is 1 teaspoon: ½ teaspoon (99).

Many sources simply list culinary oregano as *O. vulgare* (16, 35, 38, 48, 85, 92) but of all the subspecies of *O. vulgare*, only *O. vulgare* subsp. *hirtum* (Greek oregano), *O. vulgare* subsp. *gracile* (Russian oregano) and *O. vulgare* subsp. *glandulosum* (Algerian oregano) are useful in cooking, although *O. vulgare* subsp. *glandulosum* is uncommon in the U.S. (102). By far the most widely used and recommended is *O. vulgare* subsp. *hirtum*, which has a "sharp," "creosote-like" aroma (102) and a flavor that is the standard for pasta and tomato sauce (38). This subspecies was introduced to the American herb trade by HSA member Arthur O. Tucker via Well-Sweep Herb Farm in 1979 (100). Although *O. vulgare* subsp. *vulgare* is generally not recommended for cooking (102), Rex Talbert and Carol Morse like the cultivar 'Humile,' and Rex describes its flavor as "sweet" (78, 95).

It is also worth repeating that plants from other genera have the characteristic oregano flavor and are known and used as "oregano." Examples include members of the Verbenaceae (verbena family), *Lippia graveolens* (Mexican oregano) and *L. micromera* (Jamaican oregano); and other plants in the mint family, *Poliomintha bustamanta* (Mexican oregano), *Plectranthus amboinicus* (Cuban oregano) (100, 102) and *Salvia greggii* (San Antone oregano, autumn sage) (16, 51).

Although a large proportion of standard spice-rack oregano is *O. vulgare* subsp. *hirtum*, bottled commercial brands may also include *O. onites* (pot marjoram) and species from different genera, including *Mentha spicata* (spearmint), *Mentha pulegium* (pennyroyal) and *Melissa officinalis* subsp. *altissima* (a type of lemon balm) (100).

Origanum xmajoricum (Italian oregano, hardy sweet marjoram)

O. xmajoricum is a universal favorite among HSA's *Origanum* aficionados. A natural hybrid of *O. majorana* and *O. vulgare* subsp. *virens*, it has the spice of oregano and the sweetness of marjoram in a blend that Susan Belsinger describes as "the best of both worlds" (7). *O. xmajoricum* can be used in most dishes that call for marjoram (51). Susan Belsinger and Tina Marie Wilcox recommend the young tops for green sauces and cheeses and to garnish vegetables. Italian oregano can be used in breads, grains, pas-

tas, beans, soups, pizzas and marinades. They prefer the dried herb in stews, casseroles and tomato sauces. To Belsinger and Wilcox, a simple combination of dried *O. xmajoricum*, olive oil, minced garlic and Parmesan cheese “elevates” garlic bread “to gourmet level” (11).

Although Madalene Hill and Gwen Barclay like the flavor of both sweet marjoram and *O. xmajoricum*, they prefer *O. xmajoricum* ‘Hilltop’ for its dependability growing in the South. When adding to sauces, soups and stews, Madalene and Gwen drop green branches into the pot in 6-inch pieces and remove the stems when the leaves drop off. They also combine *O. xmajoricum* branches with shallots, garlic and onions in a bed underneath meat, turkey or leg of lamb and baste with wine. By keeping the herbs under the meat instead of on top, they will flavor it without burning. According to Gwen, *O. xmajoricum* is “strong enough to hold up to strong meats and long cooking or mild [dishes] and quick cooking.” They also like to use it as a blender or liaison herb, to blend and mellow strong flavors. Sweet marjoram, parsley and bay are also used for this purpose (51).

***Origanum onites* (pot marjoram, rhigani/rigani, Turkish oregano)**

O. onites has a sharp (10), peppery flavor (16, 92, 104) and a scent similar to thyme (16, 92). It is one of the flavorings in Turkish Delight candy (38) and can be used fresh or dried in tea, salads and meat dishes (38, 92). Its strong taste complements Greek dishes (10) and meats (16).

***Origanum dictamnus* (dittany of Crete, hop marjoram)**

Although not in widespread culinary use in the United States, flowers are used in tea in its native Crete, and leaves have been added to sauces, salads and vermouth (16, 38, 92). Dried leaves and extracts have also been reportedly used in bitters, liqueurs and baked goods (43 cited in 92). None of HSA’s *Origanum* experts recommend this species for culinary use, and Madalene Hill and Gwen Barclay find the scent too medicinal (51) and the flavor too strong for cooking (53).

***Origanum syriacum* (za’atar, Syrian oregano, Lebanese oregano, Bible hyssop)**

Native to the Middle East, this *Origanum* can have a thyme or oregano flavor (102). A dried, ground mixture of *O. syriacum* and salt is eaten by the Bedouin people (38), and the leaves and flowering tops are used as a seasoning (38, 92). One of this species’ common names, za’atar, comes from the Middle Eastern condiment of the same name, which is a combination of *O. syriacum*, sesame seeds, sumac berries (*Rhus coriaria*) and salt (16, 94).

Lesser-known culinary species

Other species with culinary use include *O. minutiflorum* (Spartan oregano) from Turkey (102), *Origanum xhybridinum* (showy marjoram) (16) and *O. microphyllum*, which has a “strong spicy flavor” (92).

Recipes

The following recipes have been provided courtesy HSA members Susan Belsinger, Tina Marie Wilcox, Scott Kresge, Madalene Hill and Gwen Barclay. Note to recipes by Madalene Hill and Gwen Barclay: Madalene and Gwen tend to combine several fresh, mild and robust culinary herbs in a dish, along with herbal seeds, aromatic vegetables and other strongly flavored ingredients such as cheese, mustard or

wine to create deep, complex tastes. They rarely use a single herb alone, preferring not to create an easily identifiable flavor (51).

WARM CHICKEN SALAD OREGANATO

A delicious recipe of Greek origin, perfect for spring or summer-weather picnics.

2 fryer chickens, cut into serving pieces
2 teaspoons salt, divided
2½ pounds red new potatoes, or other boiling type
½ cup olive oil
4 tablespoons fresh oregano leaves and tender stems – mild *O. xmajoricum* or strong Greek type
3 tablespoons fresh parsley leaves and tender stems
½ teaspoon freshly ground black pepper
2 cloves garlic, cut in several pieces
¼ cup lemon juice
1 bunch watercress, chopped or ½ cup chopped nasturtium leaves if in season
2 hard-boiled eggs, coarsely chopped
Nasturtium flowers to garnish, optional

Cook chicken with 1 teaspoon salt in a small amount of water until tender. Remove and drain, reserving broth. Cook potatoes in reserved broth with remaining teaspoon of salt. While potatoes are cooking, prepare dressing by blending the olive oil, herbs, pepper, garlic and lemon juice together in a food processor or blender. When potatoes are tender, drain and reserve broth. Add marinade, along with cooked chicken, and about ¼ cup broth. Taste for salt and adjust as needed. Serve warm or at room temperature with watercress or nasturtium leaves and hard-boiled eggs, garnished with nasturtium flowers.

Notes: Meat may be taken off bone to serve but avoid breaking up too small. Firmly pack the fresh herbs for measuring. It is not necessary to chop the oregano and parsley before blending.

Yield: 8-10 generous servings

Recipe © Madalene Hill and Gwen Barclay

ROASTED RED PEPPER AND FENNEL VINAIGRETTE

This crunchy sweet salad is from *Herbs in the Kitchen* by Carolyn Dille and Susan Belsinger, Interweave Press, 1992.

2 large red bell peppers, roasted and peeled
2 Florence fennel bulbs, about 1¼ pounds
2 or 3 tablespoons balsamic vinegar or red wine vinegar
⅓ cup olive oil
1 garlic clove, minced
1 tablespoon fresh marjoram leaves, coarsely chopped
1 tablespoon fresh Italian parsley, coarsely chopped

Salt and freshly ground black pepper to taste
Marjoram blossoms

Cut the peppers in half and remove the seeds. Slice them into $\frac{3}{4}$ -inch slices.

Trim and clean the fennel and cut it lengthwise into $\frac{1}{4}$ -inch slices. Blanch in abundant, boiling, lightly salted water for about a minute. Drain, cool to room temperature, and pat dry.

Arrange the peppers and fennel in a serving platter.

Add the vinegar to a small bowl. Whisk in the olive oil to form an emulsion. Stir in the garlic, marjoram, and parsley. Season with salt and pepper.

Drizzle the vinaigrette over the vegetables. Marinate for an hour at room temperature before serving. Garnish the salad with marjoram blossoms if you have them.

Serves 4 as a salad, 6 as an appetizer

Recipe © Susan Belsinger and Carolyn Dille. Reprinted with permission.

STUFFED MUSHROOMS WITH OREGANO

This recipe is easily doubled and is a popular appetizer. I like using *Origanum xmajoricum* in this recipe for its fragrance, however Greek 'Kaliteri' and Syrian *O. syriacum* are also tasty.

12 large mushrooms
3 tablespoons olive oil
1 garlic clove, minced
 $\frac{1}{3}$ cup chopped parsley
1 tablespoon chopped fresh oregano or 1 scant teaspoon dried crumbled oregano
 $\frac{1}{3}$ cup fine dry breadcrumbs
 $\frac{1}{4}$ cup freshly grated Parmesan cheese
Salt and freshly ground pepper
 $\frac{1}{2}$ cup dry white wine

Carefully wipe the mushrooms clean. Remove the stems and mince them. Heat the olive oil in a small skillet and sauté the stems with the garlic, over moderate heat, for about 3 minutes.

Preheat the oven to 350°F.

Remove the mixture from the heat and add the parsley, oregano, breadcrumbs, and Parmesan cheese. Season well with salt and pepper, and blend the mixture well.

Divide the stuffing among the mushroom caps, packing it and mounding it. Arrange the mushrooms in a lightly buttered 11- by 8-inch gratin dish. Add the wine to the dish and bake the mushrooms for 10 minutes.

Place the dish under a preheated broiler about 2-inches from the heat for about 1 minute, or until the

tops are golden brown. Transfer the mushrooms with a slotted spatula to a warm platter. Serve hot or warm.

Serves 6-12

Recipe © Susan Belsinger

ITALIAN-STYLE SAUTÉED PEPPERS

Colorful, as well as flavorful, there are many variations of *peperonata*. It is often served as an appetizer in Italy--it can be hot or at room temperature--or tossed with pasta. Serve it with crusty bread and cheese, and perhaps some imported olives.

4 large sweet bell peppers: 1 red, 1 orange, 1 yellow, and 1 green
3-4 tablespoons olive oil
1 medium onion, sliced lengthwise in 1/4-inch slivers
4 garlic cloves, slivered
1 large tomato, diced, optional
About 1 tablespoon each: fresh oregano and marjoram
Salt and freshly ground pepper

Wash the peppers, stem and seed them, and remove any large ribs. Cut them lengthwise into 3/8-inch strips.

Heat the olive oil in a skillet. Sauté the peppers over medium heat, stirring occasionally, for about 5 minutes. Add the onion and garlic to the pan and cook for about 5 minutes.

If you are using the tomato, add it to the pan. Cook for about 3 minutes, stirring occasionally.

Add the oregano and/or marjoram and season with salt and pepper. Lower the heat, stir the ingredients, cover the pan and cook for about 10 minutes, or a few minutes longer. Serve hot or at room temperature.

Serves 4-6

Recipe © Susan Belsinger

PANTRY PÂTÉ WITH CANNELLINI BEANS, DIJON AND GREEN PEPPERCORNS

1 19-ounce can ready-to-eat cannellini beans, drained and rinsed
1 clove garlic, mashed
1-2 tablespoons extra virgin olive oil
2 tablespoons plain sour cream or yogurt
1 teaspoon green peppercorns, drained and finely chopped
1 tablespoon Dijon style mustard
2 teaspoons chopped fresh chives
1/2 teaspoon chopped fresh rosemary
1 teaspoon chopped fresh sage

2 teaspoons chopped fresh oregano – mild *O. xmajoricum* preferred
1/8 teaspoon freshly ground black pepper
1 teaspoon ground coriander seed
1 tablespoon fresh lemon juice
1/8 teaspoon Tabasco Sauce
Salt to taste

Combine beans, garlic, olive oil and sour cream or yogurt in food processor bowl. Process until smooth. Stir in remaining ingredients. Taste for seasoning; adjust salt and pepper. Refrigerate overnight; serve at room temperature with crackers, toast, crusty bread or raw vegetables.

Yield: Approximately 2 cups, 6-8 servings with accompaniments

Recipe © Madalene Hill and Gwen Barclay

TAPÉNADE WITH HERBS

Do not use olives from a can. Use a good, tasty imported olive like French *Nyons* or *Nicoise*, Kalamata, or some well-cured ones from California. Green olives like the meaty *Certignoli* also make a wonderful tapénade. Serve this with toast, bread, or crackers, or with grilled or raw vegetables as a dip. I especially like it with tomatoes, raw fennel, or roasted bell pepper strips, and on sandwiches and hardboiled eggs. This recipe was published in *Natural Home Magazine*, July 2004.

2 or 3 cloves garlic
Large pinch coarse salt
A few red pepper flakes, optional
Generous cup imported pitted black or green olives
2 tablespoons capers
Handful flat-leaved Italian parsley leaves, torn roughly
Generous tablespoon fresh Italian oregano or marjoram
1 teaspoon minced fresh rosemary
About 1/2 teaspoon freshly ground black pepper
About 1 teaspoon Dijon-style mustard
1/4 cup olive oil

Peel the garlic cloves and place them in a mortar with the salt and the pepper flakes if desired. Crush the garlic with the pestle and add about 1/3 of the olives. Pound the olives to crush them. Continue adding the olives another 1/3 at a time and pound with the pestle. Add the capers and crush them. The olives and capers should still have small bits and pieces.

Add the herbs and pepper and continue the pounding motion until the herb leaves are fairly broken down, but there are still some pieces. Add the mustard, and then the olive oil, drizzling in about 1 tablespoon at a time. When incorporating the oil, you should use more of a grinding motion, running the pestle around the mortar in a circular motion. This helps to form an emulsification. Add the rest of the oil, and blend well. The tapénade can be served immediately, but tastes better if it stands for about 30 minutes. Serve at room temperature. Covered tightly, it will keep in the refrigerator for a week. You may need to stir in a little more olive oil once it comes to room temperature.

Makes about 1 ½ cups

Recipe © Susan Belsinger. Reprinted with permission

CAPONATA

The classic Sicilian antipasto or appetizer is often served with or combined with fish.
Try hot as a topping for crusty bread or chilled with salad greens.

- 2 pounds eggplant, peeled and cut in 1-inch cubes (small Italian or Oriental varieties do not require peeling)
- ¼-½ cup extra virgin olive oil
- 2 large cloves garlic, mashed
- 1 medium yellow or red onion, peeled, cut in half and sliced
- 2 cups sliced celery
- 2 cups ripe Roma tomatoes or other ripe type
- 3-4 bay leaves (remove center stem and finely chop fresh leaves; if using dried leaves, break in 2 or 3 pieces)
- 2 tablespoons chopped fresh oregano (*O. xmajoricum* preferred)
- 1 teaspoon chopped fresh rosemary
- 2-3 tablespoons good quality red wine vinegar
- 2 tablespoons capers, preferably small variety (chop if large capers are used)
- ½ cup pitted Kalamata olives, coarsely chopped (or other good quality ripe olives)
- Salt and freshly ground black pepper to taste
- ¼ cup fresh basil leaves, sliced in thin pieces (do not cut until last minute)
- 3 tablespoons toasted pine nuts or walnuts (coarsely chop walnuts)
- Chopped fresh parsley to garnish

Place eggplant in a colander and sprinkle generously with salt. Let stand at least ½ hour; rinse well under cold water, drain and pat dry with paper towels.

Over medium high heat, pour olive oil (start with smaller amount) into a large heavy skillet. Gradually add eggplant, stirring constantly. Add more oil as needed. As soon as all eggplant is in pan, gradually add garlic, onion and celery. Cook until hot through but not browned, keeping heat as high as possible. Stir in chopped tomatoes, bay leaves, vinegar, capers and olives. Mix well and lower heat to simmer. Cook for about 15-20 minutes or until eggplant is tender and flavor is well developed. Add a small amount of water if mixture becomes too thick. Season caponata with salt, pepper and additional vinegar as needed. Add sliced basil leaves, nuts and parsley for garnish. Serve hot, at room temperature or chilled.

Note: It is thought that bitterness in eggplant is caused by interruptions in water supply. Check by tasting raw vegetable at stem end. When in doubt, it is better to salt and rinse to avoid the problem.

Yield: 4-6 servings

Variation: Add chopped anchovies, chunks of fish or shellfish, ham or Italian sausage to vegetables.

Recipe © Madalene Hill and Gwen Barclay

SAVORY BLACK BEAN SOUP

From Cuba to Texas, this soup is a winning recipe.

1 pound black beans, washed and culled
4-6 cups chicken or beef broth, vegetable stock or water as needed
3 cloves garlic, crushed
2 cups chopped onion
2 tablespoons fruity olive oil or butter
3-4 large bay leaves
3-4 sprigs fresh thyme – 3” long
5-6 sprigs fresh oregano (*O. xmajoricum* preferred) – 3-4” long (less if using strong flavored type)
2 teaspoons ground cumin (also known as *comino* seed in Latin cultures)
2 teaspoons ground coriander seed
1 tablespoon chopped fresh epazote – optional (1-2 teaspoons dried)
2 tablespoons chopped fresh coriander leaves (cilantro)
1-2 tablespoons chopped fresh jalapeno pepper or hot pepper sauce to taste
Salt and freshly ground black pepper to taste
1-2 tablespoons fresh lemon or lime juice, or herb vinegar
¼ cup rum – optional
Sour cream, shredded cheddar cheese, cubed avocado, and/or coriander sprigs for garnish

Cover cleaned beans with cold water and soak overnight. Drain, rinse and cook as directed, or use quick soak method by covering cleaned beans with cold water and bring to a boil; cook 10 minutes, remove from heat and let stand 1 hour. Drain, rinse and proceed with cooking as directed below.

Return soaked beans to soup pot (not a deep, narrow stockpot) with stock or other liquid, garlic, onion, olive oil, bay leaves, thyme and oregano sprigs, and ground cumin and coriander seeds. Return to a boil, reduce heat and simmer until beans are very tender, about 2 hours (boiling vigorously will cause skins to burst). Add more hot liquid as needed.

When beans are almost done, stir in epazote, coriander leaves, jalapeno pepper, salt and pepper; continue cooking until beans are tender. If a smoother soup is desired remove about 2 cups of cooked beans and puree in a blender or processor. Stir in lemon juice and rum, if desired, and additional stock to thin soup; continue cooking for 5-10 minutes, stirring often. Taste for seasonings; adjust to taste as needed. Serve with grated sour cream, cheddar cheese, cubed avocado, and/or coriander sprigs as garnish.

Yield: 6-8 servings as first course

Variation: Cook beans with smoked ham hock or turkey wings. Remove meat from the bones and chop, adding to serve. Add smoked sausage toward end of cooking time.

Recipe © Madalene Hill and Gwen Barclay

LIPTAUER CHEESE

This is a sheep's milk cheese in Hungary, named after the province of Liptauer. The cheese, with about 45% butterfat, is traditionally mixed with other seasonings, including lots of paprika for color, and known by the same name in other areas of Central Europe.

It will be most traditional when prepared with feta cheese.

- 1 cup feta cheese, small curd cottage cheese, or ricotta cheese
- 4 ounces unsalted butter, softened
- 8 ounces cream cheese, softened
- ¼ cup finely chopped yellow onion
- 1-2 teaspoons mashed anchovy fillets, depending upon personal taste
- 1 tablespoon caraway seed, bruised with the back of a spoon
- 1 teaspoon each finely chopped fresh sweet marjoram, sage and thyme (regular or lemon), stems removed
- 1 teaspoon ground paprika, preferably Hungarian
- 2 tablespoons chopped capers
- Freshly ground black pepper and salt to taste
- 1-2 tablespoons beer, white wine or milk to thin mixture as needed

In an electric mixer, whip feta cheese (or other choice) until smooth; add cream cheese and butter. Beat until light and well mixed. Add remaining ingredients, using only enough liquid to thin to a spreading consistency. Adjust with additional pepper and salt, depending upon saltiness of feta and anchovies. Chill for several hours or overnight to flavor. Serve mounded in a bowl, dusted with additional paprika. Cheese is delicious with pumpernickel or rye bread, toast or crackers, or raw vegetables.

Yield: 12-16 servings as an appetizer

Recipe © Madalene Hill and Gwen Barclay

SAVORY OATMEAL PECAN CRACKERS

- 8 ounces finely grated sharp cheddar cheese
- 3 ounces butter
- 1 tablespoon White Worcestershire Sauce
- ½ cup ground oatmeal (measure after grinding in food processor)
- ¾ cup all-purpose flour
- ½ teaspoon salt
- ⅛ teaspoon ground red pepper (cayenne)
- ½ teaspoon Tabasco Sauce
- 1 cup finely chopped pecans (measure after chopping in food processor or by hand)
- 2 tablespoons thinly sliced garlic chives
- 1 tablespoon chopped fresh rosemary
- 2 tablespoons chopped fresh mild oregano or sweet marjoram

Directions: Cream cheese and butter until smooth with paddle attachment of electric mixer. Add remaining ingredients and mix well. Divide dough in 2 portions; use plastic wrap or waxed paper to shape into logs about 6 inches long by 1½ inches in diameter. Refrigerate or freeze until firm before slicing

into thin rounds. Let soften a few minutes if frozen. Place slices on ungreased cookie sheets and bake about 10-12 minutes at 350°F until lightly browned; be sure to brown on bottom. Crackers will become crisp when cool.

Uses: Serve as an appetizer with drinks or to accompany soup or salads. Crackers are delicious with apples or pears.

Yield: About 60 crackers

Recipe © Madalene Hill and Gwen Barclay

GOAT CHEESE GOUGÈRE WITH HERBS AND GARLIC

This recipe makes a delicious, buttery dough rather like a choux paste, which results in a savory herb bread that is sort of like a popover and a rich egg bread combined. It is adapted from *Chevre! The Goat Cheese Cookbook* by Laura Chenel and Linda Siegfried. Vary the herbs with what is in season, but use a combination of only two or three herbs at a time.

1½ cups water
12 tablespoons unsalted butter, cut into pieces
¾ teaspoon salt
Freshly ground black pepper
1¼ cups unbleached flour
¼ cup whole-wheat flour
6 extra-large eggs, at room temperature
5 ounces chevre, fresh or aged, or feta
¼ cup fresh chopped Italian flat-leaved parsley
3 tablespoons each: chives, marjoram
4 large cloves garlic, finely minced
About 1 tablespoon sesame seed

Butter and flour a large baking sheet. In a medium saucepan, heat the water, butter, salt and pepper over medium heat, stirring until the mixture comes to a boil.

Add the flour all at once and beat with a wooden spoon, for about a minute, until the mixture begins to form a ball. Remove from heat and let cool. Preheat oven to 375°F.

Transfer the mixture to a food processor and add the eggs one at a time, beating until smooth and satiny after each addition.

Break the goat cheese into large pieces or crumble the feta into small pieces and add it to the processor with the herbs and garlic. Process until just blended.

Drop the dough by heaping tablespoons onto the prepared baking sheet, forming a large wreath shape. Sprinkle with the sesame seeds if desired and bake until well-browned, about 35 minutes. Serve immediately or while still warm.

Serves 6-8

Recipe © Susan Belsinger

HONEY AND EGG FRESH HERB BREAD

A batter type bread that does not need to be kneaded!

1½ cups milk
½ cup butter (4 ounces)
2 tablespoons dry yeast
¼ teaspoon sugar
6 ounces warm water (110-115°F)
½ cup honey (not extremely dark type)
2 eggs, lightly beaten
1½ tablespoons salt
1½ tablespoons wheat germ
⅓ cup finely chopped yellow onion
1½ tablespoon chopped fresh basil – substitute 2½ teaspoons basil oil concentrate
1 tablespoon chopped fresh thyme
1½ tablespoon chopped fresh mild oregano or sweet marjoram
6-7 cups all-purpose flour

Combine milk and butter in a small saucepan and heat to 120°F. Combine yeast, sugar and warm water in a measuring cup, stirring lightly; let stand to proof (will bubble).

Place milk and butter in mixer bowl, add yeast mixture and all remaining ingredients in order listed; make sure well mixed before adding flour. Mix until well combined. Turn into a large, well-oiled bowl; cover and let rise in the refrigerator a least 2 hours or until doubled in bulk. Punch down and divide into 2 portions; shape into loaves and place in oiled 9x5-inch loaf pans. Cover and let rise in a warm place until doubled in bulk, about ½ -¾ hour. Bake at 350°F about 25-30 minutes until golden brown. Remove from oven and brush hot bread with soft butter. Let cool slightly before slicing. Bread should be refrigerated or frozen to store. To re-warm, slice and wrap tightly in foil; heat in 350°F oven for about 25-30 minutes. Serve hot.

Yield: 2 large loaves

Note: Bread makes delicious grilled sandwiches or toast.

Recipe © Madalene Hill and Gwen Barclay

PIZZA WITH SUNDRIED TOMATOES, GOAT CHEESE, AND ORIGANUM FLOWERS

This delicious pizza is worth making, especially when your origanums are in bloom. If you don't have time to make the crust you can go ahead and use a pre-made pizza crust. This recipe is excerpted from *Flowers in the Kitchen* by Susan Belsinger, Interweave Press, 1991.

1 tablespoon active dry yeast
Pinch of sugar
¼ cup warm water
2 cups unbleached white flour
¼ cup rye flour

$\frac{2}{3}$ cup warm water
1 tablespoon olive oil
 $\frac{1}{2}$ teaspoon salt
1 large clove garlic, very finely minced
 $1\frac{1}{2}$ tablespoons olive oil
Salt
 $\frac{3}{4}$ cup sundried tomatoes, cut into $\frac{1}{4}$ -inch slivers
1 medium onion, quartered lengthwise and sliced thinly
 $5\frac{1}{2}$ ounces goat cheese, crumbled
1 tablespoon finely chopped Italian parsley
2 tablespoons marjoram or oregano blossoms
Olive oil for burnishing

To make the dough, dissolve the yeast and sugar in the $\frac{1}{4}$ cup warm water. Mix the flours in a bowl and make a well in the flour. When the yeast is foamy, add it to the well. Let the sponge rise about 5 minutes.

Gradually add the $\frac{2}{3}$ cup water, adding 1 tablespoon olive oil and $\frac{1}{2}$ teaspoon salt about half way through adding the water. Stir well with a wooden spoon, incorporating all of the flour; the dough will be a bit sticky though very lively.

Turn the dough onto a floured surface and knead for 10 minutes, adding a little more flour if necessary. Transfer the dough to a lightly oiled bowl, covered with a damp tea towel, and let rise for 1-1 $\frac{1}{2}$ hours, until doubled in bulk. (Or the dough can be covered with plastic wrap and refrigerated overnight; allow the dough to come to room temperature before proceeding.) Punch the dough down and let it rest for 15 minutes before forming into pizza shapes.

Prepare the pizza toppings; mix the finely chopped garlic with the olive oil. Preheat a baker's tile or pizza stone in a 450-500°F oven for 20-30 minutes.

Divide the pizza dough into two equal parts. Form one piece of dough into a 9 or 10-inch round on a pizza paddle that has been lightly dusted with flour or cornmeal. (Be sure to flour the paddle or the pizza will stick.) Brush the top of the dough with half of the garlic in olive oil. Sprinkle lightly with salt. Spread half of the sundried tomatoes over the dough, and cover them with half of the onions.

Slide the pizza onto the baking stone and bake for about 5 minutes, until the crust is puffed around the edge and just starting to turn golden. Remove the pizza, using the paddle, and evenly spread half of the crumbled goat cheese over it. Return the pizza to the oven for about 3 minutes more, until the cheese begins to melt and the bottom crust is done.

Remove the pizza to a cutting board and sprinkle it with half of the parsley and half of the marjoram or oregano flowers. Brush the edges of the pizza crust lightly with olive oil. Cut into 8 pieces and serve hot. Repeat the procedure for the other pizza.

Makes two 9- or 10-inch pizzas

Recipe © Susan Belsinger. Reprinted with permission.

MEATLESS MEATLOAF

Tina Marie grew up eating meatloaf, which her mother prepared with ground beef and lots of vegetables, baked in the oven in an iron skillet. We've substituted tofu for the beef. When you freeze tofu overnight and then let it thaw—it changes the texture—it becomes crumbly and more “meaty” in texture. We drain it and then sauté it with garlic and oregano to enhance the flavor. This may not be your mother's meatloaf, but it tastes close to home and has the right “mouth feel.”

About 1 pound frozen tofu, thawed, crumbled and drained
1 tablespoon dried *O. xmajoricum* or *O. xmajoricum* 'Hilltop' leaves (no other will do)
1 pint home canned tomatoes or 14-15-ounce can tomatoes, chopped
1 8-ounce can tomato sauce
1 medium onion, chopped
½ green bell pepper, chopped
2 eggs
3 tablespoons olive oil
1 cup rolled oats
3 cloves garlic, minced
2 celery stalks, chopped
Salt and pepper
Ketchup to drizzle over top

Preheat the oven to 375°F. Heat the olive oil in a skillet over medium heat. Add the crumbled tofu and sauté for about 10 minutes, stirring so it doesn't stick. Add minced garlic and crumble 1 teaspoon of the *O. xmajoricum* into the tofu halfway through the sautéing. Season with salt and pepper.

Beat eggs in a large bowl, add the oats, and stir to combine. Add tomatoes, tomato sauce, onion, celery, bell pepper, crumble in the remaining oregano, and season with salt and pepper. Stir in the sautéed tofu and mix to blend.

Add a little more oil to the skillet if necessary and turn the mixture into it. Drizzle ketchup on top. Bake in a hot oven for 40-45 minutes until bubbling and golden brown around the edges. Serve with mashed potatoes, corn on the cob, and green beans. Texan vegetarians will love you for this meal.

Recipe © Tina Marie Wilcox. Reprinted with permission from “Our Favorite Oregano in the Kitchen” by Susan Belsinger and Tina Marie Wilcox in *The Herbarist*, 2004.

CHRISTMAS EVE SEAFOOD LASAGNA

Seafood is traditional for this special day in many parts of the world, and this lasagna is a very great treat.

8 ounces lasagna noodles (enough for 3 layers in dish)
1 pound whole milk ricotta cheese or small curd cottage cheese
½ cup freshly grated Parmesan cheese
2 tablespoons sliced chives
2 tablespoons chopped fresh parsley, preferably Italian flat-leaf variety
Salt and freshly ground white pepper to taste

¼ teaspoon Tabasco Sauce or ground red cayenne pepper
1 teaspoon mashed garlic
4 eggs, lightly beaten
½ cup butter
½ cup flour
3½ cups milk
1½ cups heavy cream
3 tablespoons chopped fresh sweet marjoram or mild oregano
1 tablespoon chopped fresh thyme (lemon thyme would be very good)
½ pound Fontina cheese, grated (substitute baby Swiss, Muenster, mozzarella or other mild white cheese)
1 pound medium shrimp, cooked, peeled and chopped (2 pounds raw in shell)
½ pound cooked oysters, clams or scallops
½ pound crab, picked over carefully to remove bits of shell and cartilage
Chopped fresh parsley to garnish

Cook lasagna noodles according to package directions, or use pre-cooked type. Drain and place in a single layer on an oiled sheet pan. Brush with oil and cover with a damp paper towel. Set aside while remaining ingredients are assembled.

Mix ricotta and Parmesan cheese, chives, parsley, salt and pepper to taste, Tabasco sauce, garlic and beaten eggs. Set aside. In a heavy 2-quart saucepan, melt butter over medium heat; stir in flour, mixing well. Heat mixture to bubbling, and then gradually pour in milk, stirring constantly. Add cream, marjoram and thyme, and season with salt and pepper. Cook sauce until thickened, stirring constantly in a figure-8 or zigzag pattern to keep from sticking. Remove from heat and stir several more times until sauce cools slightly.

Butter a 9x3x2½-inch (or 11x15x3-inch) baking dish or casserole. Spread a thin layer of sauce in bottom of pan, about ½ cup. Arrange one layer of noodles, then spread ½ of ricotta mixture over noodles; sprinkle with ⅓ of shredded Fontina. Add ⅓ of seafood. Repeat process. Cover with ½ of sauce. Top with a third layer of noodles and remaining seafood. Finish with remaining sauce.

Cover dish loosely with foil. Bake at 350°F for 40-45 minutes, or until lasagna is bubbling in center and lightly browned. Test doneness with a knife in center of dish. Sprinkle with remaining cheese; remove dish from oven and let rest at least 5 minutes before cutting into squares. Garnish with chopped parsley or other herbs.

Note: If seafood is not already cooked, boil shrimp for 1 minute in salted water, seasoned with onion, celery, lemon slices, bay leaves and Tabasco Sauce. Peel shrimp and chop coarsely unless quite small. Sauté oysters, clams or scallops in a small amount of butter until just colored. Drain well and chop coarsely as needed. Crabmeat is usually precooked when purchased.

Any combination of shellfish may be used in lasagna, even fish fillets. For boneless fillets, cook quickly in water or broth, and then break into 2-inch pieces. Be very careful in handling or fish will break into tiny bits.

The smaller sized dish indicated will be very full. Place on a foil-covered sheet pan to catch any liquids which may boil over.

Yield: 12-15 servings

Recipe © Madalene Hill and Gwen Barclay

GRILLED PORK TENDERS
With Chimichurri Basting Sauce and Three Pepper Relish

2½ -3 pounds fresh pork tenders, trimmed of tendons, connective tissue, and excess fat
½ cup Chimichurri (recipe below)
⅓ cup dry wine, red or white
2 tablespoons Dijon or grainy style mustard
Salt and freshly ground black pepper as desired
Chopped fresh parsley for garnish
Three Pepper Relish (recipe below)

Prepare pork tenders as directed above. Combine Chimichurri, wine and mustard of choice. Spread liberally over all surfaces of meat; sprinkle with salt and freshly ground black pepper. Cover and marinate up to 2 hours at room temperature or overnight in refrigerator.

Heat charcoal or indoor grill until very hot. Oil cooking surface lightly. Cook pork, turning to evenly brown on all sides, about 20 minutes total, or until meat is firm and juices run clear. Do not over cook. Cover grill, leaving vents partially open to smoke, if desired. Internal temperature, tested at mid-thickness of pork tenders should register 150°F for medium rare. Baste every 5-6 minutes with remaining sauce. Note: It is not usually advised to cook pork rare.

Remove pork tenders to a warm platter or carving board, cover loosely and let stand about 5 minutes for juices to set. Slice in ¼-inch slices across the grain of meat, with knife held at a 45 degree angle to achieve wider slices. Sprinkle with parsley to garnish and serve with additional Chimichurri and Three Pepper Relish.

Serves: 6-8 with Three Pepper Relish

Alternative Method: Sear pork tenders in a lightly oiled, large oven-proof skillet over high heat; roast in a 400°F oven until done, about 25 minutes. Baste with marinating liquids while roasting.

Recipe © Madalene Hill and Gwen Barclay

TRADITIONAL CHIMICHURRI

A Pungent seasoning blend of South American origin
and used as a basting sauce and condiment

2 tablespoons coarsely chopped garlic
2 cups firmly packed parsley leaves and tender stems (preferably flat-leaved)
½ cup firmly packed cilantro leaves and tender stems (coriander leaves)
3 tablespoons fresh oregano – we prefer mild *O. xmajoricum* but a stronger variety may
be used
2 tablespoons fresh thyme

4 fresh bay leaves, center stem removed
Dash crushed red pepper or ground Cayenne pepper
¾ cup vinegar – white wine or cider
¾ cup extra virgin olive oil
Salt to taste – at least ½ teaspoon

Combine garlic and herbs in processor; finely chop. Add vinegar, olive oil and salt. Let stand overnight in refrigerator to mellow flavors. If fresh bay leaves are not available, grind dried bay in a spice mill.

Chimichurri is delicious on grilled meats, poultry and fish. It keeps well in the refrigerator because of its vinegar content. Store up to 1 week.

Yield: 2 cups

Note: Traditionally, Chimichurri contains considerably more olive oil than this version but more can be added to achieve a lighter flavor.

Recipe © Madalene Hill and Gwen Barclay

THREE PEPPER RELISH

Excellent with pork but is equally complimentary to other meats, chicken or fish. Try as an appetizer with toast or chips.

1 fresh red sweet bell pepper
1 fresh yellow sweet bell pepper
1 fresh *poblano* pepper or other mildly hot, large fresh chiles – adjust number for smaller chiles
½ cup sliced green onion
3 tablespoons extra virgin olive oil
1-2 tablespoons rice wine vinegar
1 large clove garlic, mashed with ¼ teaspoon salt
1 tablespoon chopped fresh oregano – *O. xmajoricum* preferred but other varieties may be used.
⅛ teaspoon fresh ground black pepper
¼ cup fresh basil leaves, sliced into thin strips (note: do not cut basil until ready to combine)

Over a gas flame or in a 450°F oven, roast peppers until skin is black and charred. Remove and quickly place in a paper or plastic bag. Close bag and let cool until peppers can be handled. Peel skin away with a small knife and discard. Cut open and remove core, seeds and white placenta. Do not rinse. Slice peppers into ¼-inch pieces and place in a medium glass bowl.

Combine prepared peppers with remaining ingredients. Let stand at room temperature for 1 hour to mellow flavors. Store in refrigerator for up to 1 week.

Note: A tablespoon of Chimichurri is delicious added to relish.

Yield: About 1½ cups

Recipe © Madalene Hill and Gwen Barclay

LEMON THYME AND ITALIAN OREGANO CHIMICHURRI

A variation on the classic Central and South American condiment.

2 tablespoons coarsely chopped garlic
2 cups tightly packed parsley (preferably flat-leaved)
¼ cup tightly packed lemon thyme leaves and tender stems
½ cup tightly packed mild oregano leaves and tender stems (*O. xmajoricum*)
½ cup tightly packed cilantro leaves and tender stems (coriander)
Peel of 1 lemon, yellow portion only, cut into small pieces
4 fresh bay leaves, with center stem removed
Dash crushed red peppers or ground cayenne to taste
¾ cup vinegar (white wine or cider) or lemon juice
¾ cup extra virgin olive oil
½ teaspoon salt

Combine garlic, herbs and peppers in processor; finely chop. Add vinegar or lemon juice, olive oil and salt. Process until completely mixed. Refrigerate at least 24 hours before using to mellow flavors. Store in refrigerator for up to 1 week; do not freeze. If fresh bay leaves are not available, grind dry leaves in a spice mill.

Yield: About 2 cups

Recipe © Madalene Hill and Gwen Barclay

SIMPLE TOMATO SAUCE

This easy tomato sauce is tasty—both savory and sweet. Traditionally I use Italian oregano (*Origanum xmajoricum*), however other origanums can be used, they will just make the sauce a little spicier. Flavorful tomatoes are essential to the taste of this sauce. If the tomatoes are very acid—which they can be sometimes—add a few teaspoons of honey or sugar. Reduce the sauce by cooking longer if the tomatoes are watery.

2-2½ pounds ripe tomatoes, peeled, and diced or a 28-ounce can tomatoes, diced
1 tablespoon and 1 teaspoon chopped fresh oregano or 1½ teaspoons crumbled dried oregano
2 teaspoons chopped fresh marjoram or 1 teaspoon crumbled dried marjoram
About 1 cup finely diced onion
3 garlic cloves, minced
2 tablespoons olive oil
About 1 teaspoon salt

In a non-reactive saucepan combine the tomatoes, oregano, marjoram, onion, garlic, olive oil, and salt. Bring to a boil and simmer the mixture over moderate heat for 20 minutes, stirring occasionally. Taste for salt and sweetness and adjust if necessary. Serve the sauce as is—which is a bit chunky—or puree all or part of it.

This sauce can easily be doubled or tripled and processed in canning jars.

Makes about 1 quart

Recipe © Susan Belsinger

MASTER RECIPE FOR HERBAL DRESSING

½ cup canola oil
½ cup extra virgin olive oil
⅓ cup white wine vinegar
⅓ cup water
1 large clove garlic, peeled and cut into several uniform pieces – about 1 teaspoon
½ teaspoon each freshly ground coriander and cumin seeds
½-1 teaspoon salt
1 tablespoon Dijon style mustard or good homemade mustard, optional
½ teaspoon hot pepper sauce or small piece of hot fresh chile – seeded and de-veined
⅛ teaspoon freshly ground black pepper
¼ cup firmly packed fresh parsley leaves and tender stems
¼ cup firmly packed fresh leaves and tender stems of *O. xmajoricum*
2 tablespoons firmly packed fresh leaves and tender stems of spearmint
1 tablespoon firmly packed fresh leaves of rosemary

Combine all ingredients in blender container or food processor work bowl; blend until smooth. Taste for salt and other seasonings. Hot pepper can be increased to make a piquant flavor if desired. Salt measurement will vary depending upon mustard and type of vinegar. Avoid blending too long after herbs are added to keep dressing from becoming green puree. Store in the refrigerator in glass or plastic refrigerator container for up to 1 week.

Yield: About 2 cups dressing

Recipe © Madalene Hill and Gwen Barclay

FOUR OREGANO PESTO

¼ cup Greek oregano (*Origanum vulgare* subsp. *hirtum*)
¼ cup sweet marjoram (*O. majorana*)
¼ cup golden oregano (*O. vulgare* subsp. *vulgare* 'Aureum')
¼ cup Cuban oregano (*Plectranthus amboinicus*)
½ cup flat-leaf parsley
2 tablespoons minced garlic
½ cup pecan pieces, toasted
¼ cup freshly grated Parmigiano-Reggiano cheese
1 teaspoon balsamic vinegar
1 teaspoon sea salt
1 cup extra virgin olive oil
Pepper to taste

Put the first ten ingredients in a food processor and pulse until mixture is finely ground. Turn the machine on and pour the olive oil in a steady stream. Stop and scrape down the sides, then process until the sauce is smooth and slightly creamy. Taste and add pepper to taste. Store tightly covered in the refrigerator for up to 1 week.

Recipe © Scott Kresge

FRESH HERBAL BLEND FOR POULTRY

This concentrated mixture is delicious for poultry of all types, seafood, delicate vegetables, rice and pasta. All measurements of herbs should be firmly packed.

1 cup fresh sweet marjoram or mild oregano (*O. xmajoricum*) leaves and tender stems
¼ cup sliced onion chives
1 cup fresh parsley, leaves and stems
¼ cup fresh French or English thyme leaves and tender stems
¼ cup fresh sage leaves
4 large fresh bay leaves, tough center stem removed
½-¾ cup vegetable oil, as needed

Combine all ingredients in food processor or blender; process until uniformly chopped. Add larger measurement of oil if needed to smooth. Use immediately or, to keep fresh and safe, store in freezer for up to 2 years.

Note: If fresh bay leaves are not available, dry may be substituted, but do not blend with other herbs. Break into several pieces and add to blended mixture. Remove before serving.

Yield: 2-2½ cups

Recipe © Madalene Hill and Gwen Barclay

DRIED MEDITERRANEAN HERB MIX

This combination of dried herbs features the *origanums*, and you will find it handy to have in the pantry. It goes with all sorts of dishes from tomato sauce, pasta dishes, marinades, vegetables, meat and fowl, minestrone and other soups, vinaigrettes for salads, and mixed with garlic, olive oil, and a little fresh Parmesan for garlic bread.

If you are using Greek oregano, which is much more pungent than Italian (or Sicilian), then use equal portions of the herbs—⅓ cup of each.

½ cup whole dried Italian oregano leaves
¼ cup whole dried marjoram leaves
¼ cup whole dried Genoa Green basil leaves

Combine the whole, dried herb leaves in a bowl and toss to blend. Pack the herbs into a glass jar, label, and store away from heat and light. When you use the herbal blend, crumble the leaves as you need them in order to release the essential oils and flavor right into the dish.

Makes about 1 cup

Recipe © Susan Belsinger

MARJORAM MANGO ICE CREAM

1 pound of chopped fresh mango
1½ cups sugar
½ cup water
1 quart of cream
2 tablespoons whole fresh marjoram leaves
8 egg yolks

In a saucepan, combine the mango, sugar and water. Over medium-low heat, simmer for 5 minutes. Remove from the heat and cool. In a food processor fitted with a metal blade, pulse several times, so that the mixture is lightly chunky. Remove from the processor and reserve. In another saucepan, add the cream. Bring the liquid to a near boil, remove from heat, add the marjoram and let steep for 30-45 minutes. Pour cream through a sieve and remove all of the marjoram. Bring the infused cream back to a near boil. Whisk the egg yolks together. Very slowly whisk 1 cup of the hot cream into the egg mixture. In a steady stream, slowly add the egg mixture to the hot cream mixture, whisking constantly. Continue to cook on very low heat for 4-7 minutes, stirring constantly till mixture thickens. Remove from the heat and stir in chunky mango mixture. Cool completely. Add the mango/cream mixture to the electric ice cream maker. Process according to manufacturer's directions.

Recipe © Scott Kresge

MARJORAM APPLE TART

Crust:

2 cups flour
2 teaspoons baking powder
½ cup Crisco
½ cup ice water

Filling:

6-8 firm apples
½ cup sugar
1 teaspoon finely chopped marjoram leaves

Crumbs:

½ stick butter
1 cup flour
½ teaspoon cinnamon
¼ cup brown sugar

Preheat oven to 350°F

Oregano and Marjoram: An Herb Society of America Guide to the Genus *Origanum*

For crust, mix flour, baking powder and Crisco with a pastry blade. Slowly add water until it adheres and forms a ball. On a floured surface, roll in a perfect round until it will fit the pie pan.

Sprinkle flour on bottom of crust and lay in apples (slices on the bottom, halves and quarters on top). Sprinkle apples with sugar and marjoram leaves. Top with crumbs and sprinkle with cinnamon.

Bake 50-60 minutes or until soft.

Recipe © Scott Kresge

CRAFT USES

Due to their beautiful flowers and bracts, many *Origanum* species and cultivars are ideal for dried arrangements and crafts. Carol Morse likes to make holiday swags with bay leaves, oregano and other herbs (78). Susan Belsinger adds the dried, pressed flowers to herbal notecards (7).

Both the foliage and the flowers of the origanums can be used in wreaths for their beauty and fragrance (51). Tina Marie Wilcox uses the purple flowers of the ornamental *O. vulgare* subsp. *vulgare* in everlasting, wreaths and swags (114). The majority of the ornamental species and cultivars will retain their color and shape when dried (87), but according to Scott Kresge, the “gorgeous dark pink and purple flowers” of *O. ‘Herrenhausen’* and *O. ‘Rotkugel’* dry and keep particularly well (64). The flower spikes of other ornamentals like *O. rotundifolium* and *O. libanoticum* can also be used in dried arrangements (104).

Sweet marjoram (2, 7, 32), *O. onites* and *O. vulgare* leaves and flowers can be included in potpourris (16), and sprigs can be added to tussie mussies and bridal bouquets to symbolize joy and happiness (66, 86). Marjoram can also be used in advent wreaths for its symbolism of joy, happiness and kindness (65).

Dyes can be made from both sweet marjoram and oregano. A red or purple dye was historically created from the dried and fermented flowers of *O. vulgare* subsp. *vulgare* (22, 85, 92), and the tops of *O. majorana* can be used to dye wool yellow, gold, orange, brown or gray, depending on the mordant (metallic compound) used to treat the yarn (22).

MEDICINAL USES

Although not in widespread medicinal use today, *Origanum* plants have a long history of use in folk medicine and a chemistry that shows some promise for modern applications. Species that have been used medicinally include *O. vulgare*, *O. majorana*, *O. dictamnus* and *O. syriacum*, among others. Origanums have been used to treat many conditions, from digestive problems, menstrual irregularities and cancer to aches, pains and the common cold.

Dittany of Crete has been used internally as a tonic, digestive aid (16, 89), for rheumatism and respiratory ailments and externally for snakebite, sciatica and wounds (16). In Crete, *O. dictamnus* is still used today for tonsillitis, toothache, rheumatism, amenorrhea, diabetes, kidney and liver problems, obesity, digestion and externally for wounds and headaches (91).

O. vulgare's uses in folk medicine include respiratory problems, coughs, upset stomach, painful menstruation/as an emmenagogue (48), rheumatoid arthritis, scrofulosis, to induce sweating, for urinary problems and as a diuretic (14, 48, 49). It is used internally for colds, flu, fever, painful periods and digestive disorders and externally for bronchitis, asthma, arthritis and muscle aches (16). In Chinese medicine, oregano is a remedy for colds, vomiting, fever, dysentery, jaundice and childhood malnutrition (49). Oil is reportedly used to kill lice (16), and in homeopathy, oregano is considered an aphrodisiac (49). Preparations include infusions, tea powders, gargles and baths (14, 49).

O. majorana has been used to treat cancer (57, 69), colds, rhinitis and gastritis, and the herb and essential oil have been used for cramps, depression, gastrointestinal problems, headaches, coughs, paralysis and as a diuretic (49). The species is used externally for chest congestion, muscle aches and arthritis, and warm olive oil infused with sweet marjoram is a reported remedy for ear infections (16). Like *O. vulgare*, *O. majorana* is employed as an aphrodisiac in homeopathic medicine (49). It can be prepared as an infusion/tea, mouthwash, poultice (49) and tincture (36), and the oil is an ingredient in ointments and compound preparations (49).

O. onites is a primary ingredient in kekik water, a "household remedy" prepared in villages and sold commercially in Turkey (4), and *O. syriacum* has reportedly been used to treat heart problems, cough, toothache (44), colds, anxiety and wounds (26).

A number of the genus's reported medicinal activities have been supported by animal/in vitro studies or assays of isolated extracts or chemicals from the plants (36). Several plants in the genus are antibacterial, antifungal and antimicrobial due to the phenol carvacrol (49, 102). The essential oil of *O. vulgare* is antimicrobial (49), and *O. majorana* plants and/or essential oil are antimicrobial (102), anti-viral, insecticidal (49), and antibacterial (14). *O. syriacum* is reportedly antifungal, and *O. onites* oil has antifungal and antibacterial properties (102). *Origanum* species including *O. vulgare*, *O. majorana* and *O. dictamnus* may be antispasmodic due to the presence of flavonoids (3). Some *Origanum*s may also have antioxidant effects due to the phenols carvacrol and thymol, polar hydroxycinnamic derivatives and flavonoid glycosides (3). There is also limited scientific evidence that *O. vulgare* and *O. majorana* may have anticancer, sedative, diuretic, diaphoretic and analgesic activities and that *O. vulgare* may aid digestion (36).

It is important to note that although many sources list medicinal actions for the essential oil of *O. vulgare* and *O. vulgare* subsp. *hirtum*, most commercial oil of *Origanum* is actually sourced from *Thymbra capitata* (syn. *Thymus capitatus*). According to Dr. Arthur O. Tucker, there is a great deal of confusion in the essential oil literature, but "high-carvacrol oils would have similar applications" (101).

The German Commission E considers both *O. vulgare* and *O. majorana* "unapproved" (14), but the *American Herbal Products Association Botanical Safety Handbook* lists *O. vulgare* subsp. *hirtum* and *O. majorana* as class I herbs "that can be safely consumed when used appropriately" (74), and economic botanist and former USDA researcher Dr. James A. Duke gives both *O. vulgare* (subspecies not identified) and *O. majorana* his highest safety rating (i.e. "safer than coffee") (36). Some sources advise against the use of *Origanum*s during pregnancy due to uterine stimulating and abortifacient effects (3). Oregano may also disrupt progesterone, an important pregnancy hormone (117 cited in 26). According to the *PDR for Herbal Medicines* and *Commission E Monographs*, *O. majorana* should not be used for extended periods due to arbutin and hydroxyquinone, the latter of which is carcinogenic, and salves should not be used on young children or infants (14, 49). Oregano/*O. vulgare* may cause systemic allergic reactions in some individuals who consume the herb, and there have also been reports of contact dermatitis (3, 72). *O. majorana* food flavoring has reportedly caused perioral dermatitis (3), and although there is con-

flicting information about *O. vulgare* oil and skin sensitivity, oil may be a dermal toxin and skin irritant, and at least one source cautions against home use (67). Tina Marie Wilcox felt this effect first hand when she experienced intense burning after applying *Origanum* oil mixed with nut oil to insect bites (114).

GARDEN USES

There are probably as many ways to use origanums in the garden as there are species in the genus. The key is to respect the plant's natural tendencies and to consider how its physical appearance and growth habit will complement other plants in the garden.

In the landscape, origanums can be grown in edgings, pots and borders (102) and dwarf, spreading types like *O. vulgare* subsp. *vulgare* 'Humile' can be used as groundcovers (78, 104). According to Carol Morse, *O. vulgare* subsp. *vulgare* 'Humile' makes a good edible ground cover that can be planted between stepping stones or allowed to grow to 6 inches for wilder or eccentric paths (78).



Origanum xmajoricum (left) with thyme and chives
Image courtesy Arkansas Dept. of Parks and Tourism

Susan Belsinger, Joan DeLauro, Gwen Barclay and Henry Flowers recommend planting origanums with plants having similar growth requirements (7, 33, 51), like savory, thyme, lavender, sage and rosemary (7). Tina Marie Wilcox likes to plant *O. vulgare* with yarrow, silver king artemisia and tansy since they all send out runners underground, are harvested the same way and can be cut to the ground when they flower (114). Dittany of Crete's small, fuzzy leaves make it ideal for fairy gardens (7). Francesco DeBaggio plants his origanums all over the garden and suggests growing around ponds (32).

According to Henry Flowers, oregano's fine texture can provide a nice contrast to coarser, bolder-leaved plants. He uses origanos in borders and beds, and plants the mounding types as fillers. The soft texture looks great around shrubs and under roses, and the gray-leaved species look wonderful with lavenders. Henry also suggests planting with plants with different bloom times for variety and a continuous display. Although *O. xmajoricum* is a culinary *Origanum*, its graceful, fountain-like flowers make it a perfect addition to many types of gardens and plantings (51).

There are many origanums that are planted exclusively as ornamentals for their attractive bracts, flowers and foliage. These include *O.* 'Kent Beauty,' *O.* 'Hopley's Purple,' *O.* 'Herrenhausen,' *O. sipyleum*, *O. scabrum*, *O. acudins*, *O. amanum* and *O. xsuendermanii* (hort.), which Rex Talbert describes as "exotic looking" (95). Some of the hybrids and lesser-known ornamentals are James Adams's favorites for mixed plantings. According to Jim, "cultivars such as *O.* 'Herrenhausen' and *O.* 'Rotkugel' are really beautiful in a perennial planting or planted next to a walkway. They might not be tasty in food, but when stepped on they release an oregano scent which is always welcome" (1). For edging, Barbara Varland uses the spreading, low-growing cultivars *O.* 'Jim Best', *O. vulgare* subsp. *vulgare* 'Humile,' *O. vulgare* 'White Anniversary,' *O. vulgare* 'Polyphant' and *O. vulgare* subsp. *vulgare* 'Aureum' (109). Try plants with

variegated foliage in perennial borders or mixed containers with flowers (64). Scott Kresge also recommends cascading varieties for flower boxes and mixed hanging baskets (64).

Origanums can also be planted in many types of gardens including children's, medicinal (114), and rock gardens (34, 59). The culinary oreganos can be used in pizza gardens (114), and sweet marjoram can be grown in knot gardens (41). *O. vulgare* is useful in bee and butterfly gardens (6, 93). As a butterfly nectar plant *O. vulgare* is the "preferred flower" of the *Ctenucha* moth (6), and is one of the few plants pollinated by the alfalfa leafcutting bee (*Megachile rotundata*) (93).

A practical use of origanums in the landscape is for erosion control. *O. vulgare* subsp. *vulgare* can be grown on hillsides to prevent erosion, and Tina Marie Wilcox likes to plant it on the roof of her root cellar to hold the soil in place (114).



Origanum xmajoricum border (right and back). Photo by Gwen Barclay

OTHER USES

The oils of both *O. majorana* and *O. vulgare* are used commercially to scent soaps, lotions and perfumes/colognes (16, 67, 69).

Origanum species have also demonstrated an ability to combat various pests. In Southern France, *O. vulgare* has been used to protect stored kidney beans from the bean weevil (*Acanthoscelides obtectus*) (3, 12), and a recent study supports this traditional use, showing that *O. vulgare* subsp. *hirtum* is toxic to the bean weevil through both direct contact and fumigation (3). Vapors of the essential oil of *O. syriacum* var. *bevanii* are reportedly toxic to the confused flour beetle (*Tribolium confusum*), the Mediterranean flour moth (*Ephestia kuehniella*), the carmine spider mite (*Tetranychus cinnabarinus*) and the cotton aphid (*Aphis gossypii*) (3). Extracts and essential oils of *Origanum* species have also exhibited anti-nematodal and molluscicidal effects in various studies (3).

Due to their antioxidant and antibacterial properties, origanums also show promise for food preservation. Oregano can inhibit oxidation of fats and oils due primarily to the presence of carvacrol and flavonoids (72). Although various molds, yeast and bacteria have been found growing on samples of dried oregano and marjoram, oregano (genus and species not specified) has demonstrated antimicrobial activity against a variety of organisms including *E. coli*, a subspecies of *Salmonella enterica*, *Salmonella enteritidis* and *Candida albicans* (72). According to a study published in the *Journal of Food Protection* in March 2003, the essential oil of *O. vulgare* retarded the spoilage of freshwater Asian sea bass by inhibiting bacterial growth, extending shelf-life to 33 days (50).

Species Highlights

Origanum amanum

Common Names: none
Form: evergreen subshrub
Flowers: pink
Bract Color: purple
Height: 4-8"
Width: 12"
Hardiness Zone: 5-8
Uses: ornamental



O. amanum. R. Talbert image collection

Origanum dictamnus

Common Names: dittany of Crete, Hop marjoram
Form: dwarf evergreen subshrub with erect or trailing stems
Flowers: pink, in whorls
Bract Color: purple or reddish
Height: 5-6"
Width: 8-16"
Hardiness Zone: 7-9
Uses: culinary, medicinal, economic
Scent/Flavor: menthol, camphor, medicinal



O. dictamnus. Photo courtesy U.S. National Arboretum

Origanum xhybridinum

Synonyms: *O. xhybridum*, *O. pulchellum* Boiss.
Common Names: showy marjoram
Form: perennial mounding subshrub with trailing stems
Flower Color: pink
Bracts: purple/pink; resemble hops
Height: 10-20"
Width: 10-12"
Hardiness Zone: 8
Uses: ornamental, culinary
Scent/Flavor: similar to oregano



O. xhybridinum 'Ray Williams.' HSA Archives

Origanum laevigatum

Common Names: none
Form: subshrub with ascending stems
Flower Color: reddish-purple
Bract Color: purple
Height: 20-28"
Width: 18"
Hardiness Zone: 7
Uses: craft, ornamental



O. laevigatum (above). HSA Archives

Origanum libanoticum

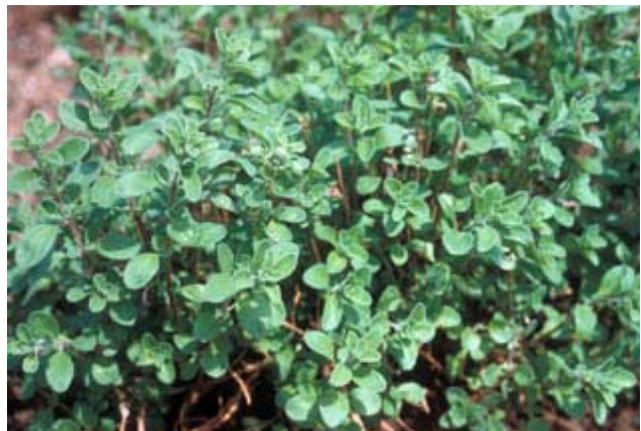
Synonym: *O. pulchellum*
Common Names: hops oregano
Form: mounding subshrub with trailing stems
Flower Color: pink
Bracts: cream/pink or purple; resemble hops
Height: 24"
Hardiness Zone: 7
Uses: ornamental



O. libanoticum. HSA archives

Origanum majorana

Synonym: *Majorana hortensis*
Common Names: sweet marjoram, knotted marjoram
Form: tender perennial evergreen subshrub with erect or ascending stems
Flower Color: white
Bract Color: grayish- or whitish-green
Height: 24-32"
Width: 18"
Hardiness Zone: 9b
Uses: culinary, medicinal, economic, craft
Scent/Flavor: sweet with floral, citrus and clove notes



O. majorana. Photo courtesy U.S. National Arboretum

Origanum xmajoricum

(hybrid of *O. majorana* and *O. vulgare* subsp. *virens*)

Common Names: Italian oregano, hardy marjoram

Form: clump-forming perennial

Flower Color: white

Bract Color: green

Height: 18-24"

Width: 12-18"

Hardiness Zone: 6-9

Uses: culinary

Scent/Flavor: similar to sweet marjoram but savory, spicy and sweet



O. microphyllum. Photo by Gwen Barclay



O. xmajoricum. Photo by Susan Belsinger

Origanum microphyllum

Common names: small-leaved oregano

Form: subshrub with ascending stems

Flower Color: purple or purplish-red

Bract Color: white

Height: 10-20"

Hardiness Zone: 7

Uses: culinary, ornamental

Scent/Flavor: spicy and strong

Origanum minutiflorum

Common Names: Spartan oregano

Form: tender perennial subshrub with erect stems

Flower Color: white

Bract Color: green

Height: 14"

Uses: culinary

Origanum onites

Synonyms: *Majorana onites*

Common Names: pot marjoram, Greek/
Turkish oregano, rhigani/rigani

Form: tender perennial semi-evergreen sub-
shrub with erect or ascending stems

Flowers: white with spikes forming a false
corymb

Bract Color: light green

Height: 12-39"

Width: 12"

Hardiness Zone: 9

Uses: culinary, craft, medicinal

Scent/Flavor: hot, peppery and thyme-like



O. onites. HSA Archives

Origanum rotundifolium

Common Names: none

Form: deciduous subshrub with trailing stems

Flower Color: white or pale pink

Bract Color: yellow-green

Height: 12"

Hardiness Zone: 7

Uses: ornamental, craft

Scent/Flavor: minimal



O. rotundifolium. HSA Archives

Origanum syriacum

Synonyms: *O. maru*

Common Names: Syrian oregano, bible hyssop, za'atar, Lebanese oregano

Form: tender perennial subshrub with erect or ascending stems

Flowers: white or purple-pink in panicles

Bract Color: green or whitish

Height: 18-36"

Width: 12-18"

Hardiness Zone: 8

Uses: culinary, medicinal

Scent/Flavor: may be thyme or oregano scented

Botanical Varieties: *O. syriacum* var. *syriacum*, *O. syriacum* var. *sinaicum*, *O. syriacum* var. *bevanii*

Origanum vulgare

Synonyms: *O. heracleoticum* Auct. (synonym for *O. vulgare* subsp. *hirtum*), *O. heraclioticum* L. (synonym for *O. vulgare* subsp. *viridulum*)

Common Names: wild marjoram, oregano

Form: woody perennial with erect stems

Flowers: purple, pink or white in panicles

Bract Color: green, yellow-green or purple

Height: 4-39"

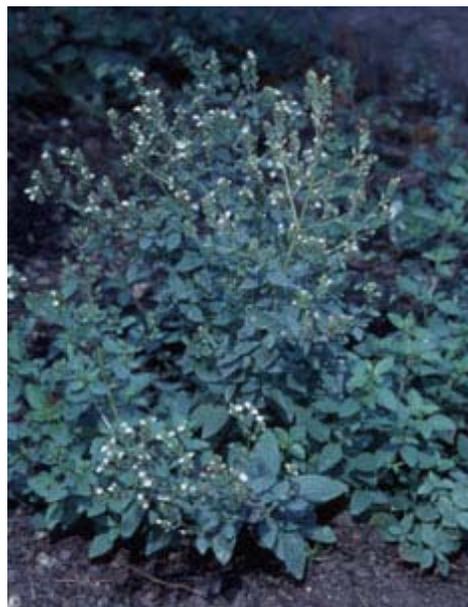
Hardiness Zone: 5-9

Uses: culinary, medicinal, ornamental, craft, economic

Scent/Flavor: culinary subspecies have spicy, pungent oregano flavor with clove and pine notes; other subspecies musty

Subspecies:

- ***O. vulgare* subsp. *vulgare*** (wild marjoram): purple bracts, pink flowers; ornamental; some Turkish plants have “musty, carnation-like” scent (102)
- ***O. vulgare* subsp. *glandulosum*** (Algerian oregano): green bracts, white flowers; culinary
- ***O. vulgare* subsp. *gracile*** (Russian oregano): green or purplish bracts, white or pink flowers; Z7; culinary
- ***O. vulgare* subsp. *hirtum*** (Greek/Turkish oregano, winter marjoram): green bracts, white flowers; Z5; culinary – hot, spicy and pungent, standard culinary oregano
- ***O. vulgare* subsp. *virens*** (wild marjoram): yellowish-green bracts, white flowers; ornamental; “musty lavender-basil” scent (102)
- ***O. vulgare* subsp. *viridulum*** syn. *O. vulgare* subsp. *viride* (wild marjoram): green bracts, white flowers; ornamental; plants from Iran have lavender-pine scent



O. vulgare subsp. *gracile*. HSA Archives

Sources for Profiles: (7, 11, 16, 18, 32, 51, 55, 56, 92, 101, 102, 104, 105, 113)

Cultivar Examples



Origanum xhybridum 'Ray Williams' (ornamental)
HSA Archives



Origanum 'Jim Best' (ornamental)
Photo by Susan Belsinger



Origanum 'Kaliteri' (syn. *O.* 'Kalitera') (culinary)
Photo by Susan Belsinger



O. 'Kent Beauty' (ornamental, craft)
R. Talbert image collection



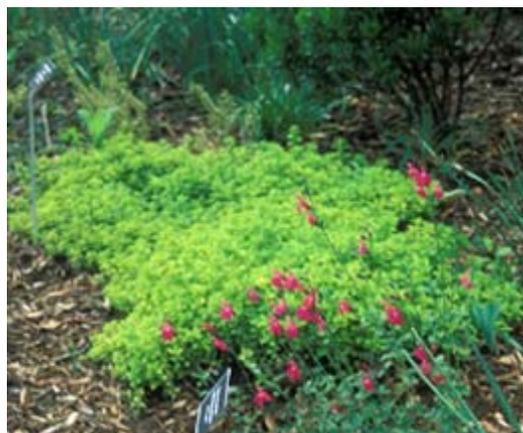
Origanum 'Herrenhausen' (ornamental, craft). Photo by Robin Siktberg



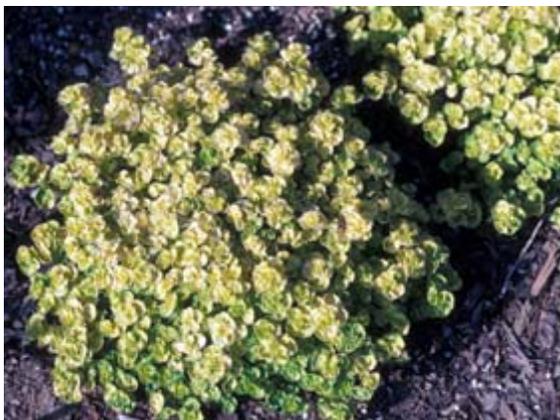
O. xmajoricum 'Hilltop' (culinary, HSA Promising Plant). Photo by Gwen Barclay



Origanum vulgare subsp. *hirtum* 'Chef's Greek' (culinary). Photo by Susan Belsinger



O. vulgare subsp. *vulgare* 'Aureum' (ornamental)
Photo courtesy U.S. National Arboretum



Origanum vulgare subsp. *vulgare* 'Dr. letsvaart' (ornamental). Photo courtesy U.S. National Arboretum



Origanum vulgare subsp. *vulgare* 'Humile' (ornamental, culinary). Photo by Gwen Barclay



O. vulgare 'Yunnan' (culinary, HSA Promising Plant.). Photo by Gwen Barclay

Other Recommended Cultivars

- Origanum* 'Barbara Tingey' (ornamental)
- O. dictamnus* 'Wee Dittany' (ornamental)
- O. xhybridinum* 'Nancy Wilson' (ornamental)
- O.* 'Hopley's Purple' (ornamental, craft)
- O.* 'Marshall's Memory' (ornamental, craft)
- O.* 'Rotkugel' (ornamental, craft)
- O.* 'Santa Cruz' (ornamental, craft)
- O. vulgare* 'Polyphant' (ornamental, craft)
- O. vulgare* subsp. *hirtum* 'Greek Mountain' (culinary)
- O. vulgare* 'White Anniversary' (ornamental, culinary)

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Gildzen, Alex. *The Origin of Oregano* [poems]. Kent, OH: Tarragon, 1971.

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Rose, Jeanne. *The Aromatherapy Book*. Berkeley: North Atlantic Books, 1992. (HSA Library)*

Tuccio, Joseph. *Oregano and Other Poems*. Calabria, Italy; Maticena, 1983.

Tucker, Arthur O. and Michael J. Maciarello. "The Essential Oil of *Origanum laevigatum* Boiss. (Labiatae)." *Journal of Essential Oil Research*. 4 (July/August 1992): 419-420.

Whiting, Edward E. "Apples Aren't Herbs." *The Herbarist*. 21 (1955): 25-28. (HSA Library)

Woodward, Marcus. *Leaves from Gerard's Herball*. Boston: Houghton Mifflin, 1931. (HSA Library)

Young, J. F. et al. "Ascorbic Acid, α -Tocopherol, and Oregano Supplements Reduce Stress-Induced Deterioration of Chicken Meat Quality." *Poultry Science*. 82 (2003): 1343-1351.

For additional titles, see the HSA Library *Origanum* Resources section of this guide.

HSA Library *Origanum* Resources

Books

* Bown, Deni. *The Herb Society of America New Encyclopedia of Herbs & Their Uses*. New York: DK, 2001.

Provides a general overview of the genus *Origanum*, with profiles of *O. dictamnus*, *O. xhybridum*, *O. majorana*, *O. xmajoricum*, *O. onites*, *O. syriacum*, *O.* 'Norton Gold,' and *O. vulgare*. Includes color photographs.

* Evans, Hazel. *The Herb Basket: Marjoram, Mint & Marigold*. North Dighton, MA: JG Press, 1996.

A brief book with basic information on *Origanum* folklore, cultivation, harvesting, drying, recipes and crafts. Evans supplies tips for rock gardens, kitchen planters, and hanging baskets and recipes for potpourri, hair conditioner, kitchen sachets, Rolled Herb Cheese, Pork Provençal with Marjoram, Mixed Herb Bread, and Tomato and Marjoram Salad. Species discussed include *O. vulgare*, *O. majorana*, *O. onites* and *O. dictamnus*. Includes color photographs.

Kintzios, Spiridon E, ed. *Oregano: The Genera Origanum and Lippia*. London and New York: Taylor & Francis, 2002.

This collection of articles by various authors addresses the botany, taxonomy, chemistry, cultivation, breeding, pharmacology, food industry uses and biotechnology of oregano plants in the genera *Origanum* and *Lippia*. A bibliometric analysis of agricultural and biomedical databases is also included.

Small, Ernest. *Culinary Herbs*. Ottawa: NRC Research Press, 1997.

This in-depth text examines the genus's description, taxonomy, history, uses, recipe sources, importance, cultivation, harvest, storage, cultivars, chemistry, medicine, nutrition and curiosities, with separate entries for *O. majorana*, *O. vulgare*, *O. onites*, *O. dictamnus*, *O. microphyllum*, *O. syriacum* and *O. xmajoricum*. Also includes black and white line drawings.

* Tucker, Arthur O. and Thomas DeBaggio. *The Big Book of Herbs*. Loveland, CO: Interweave Press, 2000.

Tucker and DeBaggio provide information on *O. majorana*, *O. xmajoricum*, *O. minutiflorum*, *O. onites*, *O. syriacum* and *O. vulgare*, with detailed description, nomenclature, chemistry, uses, cultivation, and pests/diseases information. Also includes a botanical key and extensive bibliography.

Pamphlets

* Pitzer, Sara. *Growing and Using Oregano*. Storey Publishing Bulletin A-157. Pownal, VT: Storey Communications, 1996.

The first sixteen pages are devoted to propagating, cultivating, preserving and using plants in the genus *Origanum*, followed by twelve pages of recipes, a source list for plants, seeds and supplies, and a list of recommended reading.

* White, Susie. *Origanum: The Herb Marjoram and its Relatives*. Surrey: NCCPG, 1998.

This 35-page booklet by British National Plant Collection Holder Susie White covers the taxonomy, cultivation, uses and harvesting/drying of origanums, with profiles of fifteen species, subspecies and hybrids and twenty-two named cultivars. Includes color photographs.

Selected Articles from *The Herbarist*

Belsinger, Susan and Tina Marie Wilcox. "Our Favorite Oregano in the Kitchen." *The Herbarist*. 70 (2004): 4-9.

Belsinger and Wilcox discuss identifying, purchasing, growing and using *Origanum xmajoricum*. The article includes recipes for Jalapeno and Oregano Salsa, Skillet Corn Bread with Cheddar, Chiles, and Oregano, and the Meatless Meatloaf recipe reprinted in this guide.

Brown, Harriet Addams. "Righte Dittany." *The Herbarist*. 1 (1935): 23-27.

This inaugural issue of *The Herbarist* discusses dittany of Crete's record as a medicinal plant in various classical texts, nomenclature confusion and the discovery of the earliest painting of the plant.

Burrage, Anne. "Dittany Redivivus." *The Herbarist*. 2 (1936): 58-60.

Burrage tells the story of the introduction of dittany of Crete to the U.S. by HSA members, with additional anecdotes about *O. microphyllum*.

Chandler-Ezell, Karol. "Folklore of Oregano." *The Herbarist*. 70 (2004): 16-24.

Chandler-Ezell discusses the history, folklore, chemistry/pharmacology and uses of a variety of *Origanum* species, including *Origanum vulgare*, *O. majorana*, *O. dictamnus*, *O. onites* and *O. syriacum*.

Gambee, Eleanor Brown. "An Ancient Herb Travels to the New World or Dittany of Crete and the Roman Empire." *The Herbarist*. 51 (1985): 15-19.

This article recounts in detail the story surrounding the use of dittany of Crete to heal Aeneas and provides a summary of Book XII of *The Aeneid*.

Gardner, Jo Ann. "Holy Land Herbs Revisited." *The Herbarist*. 55 (1989): 69-72.

Gardner relates her experiences with *O. syriacum* and the condiment za'atar while traveling in Israel.

Jones, Dorothy Bovee. "The Great Dittany of Crete – Then and Now." *The Herbarist*. 39 (1973): 13-18.

Jones discusses dittany's history and folklore, its use as a medicinal plant and limited use as a culinary herb, its introduction to America by HSA, her personal experience and suggestions for growing the plant.

Rollins, Elizabeth. "Origanums: Beauty and Fragrance in the Summertime." *The Herbarist*. 61 (1995): 16-22.

Rollins describes the form, appearance and cultivation of *Origanum dictamnus*, *O. calcaratum*, *O. libanoticum*, *O. sipyleum*, *O. xhybridinum*, *O. rotundifolium*, *O. 'Kent Beauty'*, *O. 'Barbara Tingey'*, *O. scabrum*, *O. 'Purple Surprise'*, *O. amanum*, *O. laevigatum*, *O. 'Santa Cruz'*, *'Aureum'* and *O. microphyllum*, as well as how some of these plants arrived in North America.

Rollins, Elizabeth. "Origanums Today." *The Herbarist*. 55 (1989): 1-5.

Rollins discusses the origanums grown by the HSA Northern California Unit for an early project to study the plants in the decade following the revision of the genus published by Letswaart.

Talbert, Rexford. "Amaracus." *The Herbarist*. 70 (2004): 11-13.

Talbert combines a discussion of *Origanum* botany and nomenclature with a review of authoritative articles on the genus.

Talbert, Rexford. "It's All in the Calyx." *The Herbarist*. 70 (2004): 14-15.

This concise article describes the nature and importance of *Origanum* calyces and includes anatomical line drawings.

Talbert, Rexford H. "Za'atar." *The Herbarist*. 60 (1994): 53-56.

This article is devoted to the herbal condiment za'atar, a mix of *Origanum syriacum*, sesame seeds, sumac and salt, and discusses the origins of the name and plants from other genera that have been used in the mix (*Satureja thymbra*, *Thymbra spicata* and *T. capitata*).

Tucker, Arthur O. "Botanical Aspects of Oregano Reconsidered." *The Herbarist*. 40 (1974): 11-13.

An early article addressing the concept of oregano as a scent/flavor rather than an individual species or genus and reporting on the efforts to identify plants obtained from the U.S. commercial market. Nomenclature is pre-letsvaart. Includes photographs.

Webster, Helen Noyes. "Notes on the Marjorams." *The Herbarist*. 14 (1948): 19-22.

Discusses the history, cultivation and appearance of wild and sweet marjoram and other organums. Nomenclature is pre-letsvaart.

Wright, Hortensia Janet. "From Cretan Hillside." *The Herbarist*. 11 (1945): 28-32.

The first half of this article provides an overview of the appearance of *Origanum dictamnus* (dittany of Crete) in the works of early writers and herbalists. The second half is a detailed physical description of the plant.

Other Articles

Belsinger, Susan and Carolyn Dille. "Cooking with Marjoram and Oregano." *The Herb Companion*. 4(3) (Feb/March 1992): 29-32.

Covers history, folklore, cultivation and culinary use. Types discussed include *O. majorana*, *O. xmajoricum*, *O. vulgare* subsp. *hirtum*, *O. onites* and *Lippia graveolens*. Includes color photographs and recipes for Stuffed Mushrooms with Oregano, Spanakopita, Hearty Minestrone and Stewed Sweet Peppers.

Goliaris, A. H., P. S. Chatzopoulou and S. T. Katsiotis. "Production of New Greek Oregano Clones and Analysis of Their Essential Oils." *Journal of Herbs, Spices & Medicinal Plants*. 10(1) (2002): 29-35.

Describes the development and analysis of four high-quality, high-carvacrol, clones of *O. vulgare* subsp. *hirtum* produced for commercial cultivation in Greece.

Houmani, Zahia et al. "The Essential Oil Composition of Algerian Za'atar: *Origanum* spp. and *Thymus* spp." *Journal of Herbs, Spices & Medicinal Plants*. 9(4) (2002): 275-280.

Discusses *Origanum floribundum*, *O. vulgare* subsp. *glandulosum* and two *Thymus* species.

Klocke, Evelyn. "DNA Fingerprinting by RAPD on *Origanum majorana* L." *Journal of Herbs, Spices & Medicinal Plants*. 9(2/3) (2002): 171-176.

This study examined the use of RAPD analysis and its potential in *O. majorana* breeding research.

Langbehn, Jan et al. "Influence of Selection and Inbreeding on *Origanum majorana* L." *Journal of Herbs, Spices & Medicinal Plants*. 9(2/3) (2002): 21-29.

Traits evaluated include resistance to lodging, anther status, yield of leaf-flower fraction, essen-

tial oil content, and percentage of cis-sabinene hydrate.

Long, Jim. "Menu: All About Oregano." *The Herb Quarterly*. 102 (Spring 2005): 26-30.

This collection of sixteen recipes includes Salsa Mexicana with Oregano, Stuffed Mushrooms, Crab Salad with Orange and Oregano on Toast, Orange and Oregano Salad, Grilled Chicken with Tequila-Oregano Butter, Corn and Tomato Salad with Fresh Oregano, Oregano Pesto Potatoes, Green Beans with Tomatoes and Oregano, Skillet Corn Bread with Oregano and Roasted Pepper, Southwestern Chocolate Cake and Orange Oregano Sorbet, among others.

Novak, Johannes et al. "Combining Ability of *Origanum majorana* L. Hybrids: Sensorial Quality." *Journal of Herbs, Spices & Medicinal Plants*. 9(2/3) (2002): 13-19.

This study used a human panel to evaluate the sensorial characteristics of taste, color and smell for *O. majorana* hybrid combinations involving cytoplasmic male sterile lines and pollinator lines.

Omer, E. A., H. E. Ouda and S. S. Ahmed. "Cultivation of Sweet Marjoram, *Majorana hortensis*, in Newly Reclaimed Lands of Egypt." *Journal of Herbs, Spices & Medicinal Plants*. 2(2) (1994): 9-16.

Recommends cultivation of sweet marjoram (*Origanum majorana* syn. *Majorana hortensis*) on reclaimed lands in Egypt using sprinkler irrigation and discusses yield and essential oil composition.

Pank, Friedrich et al. "Combining Ability of *Origanum majorana* L. Strains – Agronomical Traits and Essential Oil Content: Results of the Field Experiment Series in 1999." *Journal of Herbs, Spices & Medicinal Plants*. 9(2/3) (2002): 31-37.

Traits evaluated include anther status, plant height, resistance to lodging, parasitic attack, precocity, yield and proportion of leaf-flower fraction, essential oil content and regrowth following initial harvest.

Pizzi, Helene. "Oregano: Joy of the Mountains." *The Herb Quarterly*. 102 (Spring 2005): 21-25.

Includes information on oregano history, folklore, uses and cultivation, with attributes and growing tips for *Origanum vulgare*, *O. majorana*, *O. onites*, *O. libanoticum*, *O. dictamnus* and groundcover organums. Some of the nomenclature in this article is incorrect.

Rollins, Elizabeth D. "Origanum: Beauty of the Mountains." *Pacific Horticulture*. 52(2) (Summer 1991): 19-26.

Rollins discusses the history, appearance, cultivation and uses of a variety of *Origanum* species, hybrids and cultivars, including *Origanum rotundifolium*, *O. acutidens*, *O. scabrum*, *O. libanoticum*, *O. sipyleum*, *O. xhybridinum*, *O. dictamnus*, *O. calcaratum*, *O. majorana*, *O. xmajoricum*, *O. onites*, *O. syriacum*, *O. vulgare*, *O. laevigatum*, *O. amanum*, *O. dayi*, and *O. microphyllum*, with emphasis on California growing. Includes color photographs.

Tucker, Arthur O. "Will the Real Oregano Please Stand up?" *The Herb Companion*. 4(3) (Feb/Mar 1992): 20-22.

Dr. Tucker describes species from different genera that are considered oreganos due to their flavor, provides tips for distinguishing between culinary and non-culinary species and relates his experience growing seed from a bottle of grocery-store oregano that produced plants from multiple genera. With color photographs.

Tucker, Arthur O. and Elizabeth Rollins. "The Other Origanums." *The Herb Companion*. 4(3) (Feb/Mar 1992): 23-27.

Oregano and Marjoram: An Herb Society of America Guide to the Genus *Origanum*

Describes the habit, appearance and uses of lesser known culinary, medicinal and ornamental origanums, including the cultivars *O. vulgare* subsp. *vulgare* 'Aureum,' *O. vulgare* subsp. *vulgare* 'Dr. letsvaart,' *O. vulgare* subsp. *vulgare* 'Humile,' *O. 'Kent Beauty,'* and *O. 'Barbara Tingey,'* with color photographs of six species/subspecies/cultivars.

Wilcox, Tina Marie and Susan Belsinger. "Mediterranean Companions." *The Herb Companion*. 16(6) (September 2004): 42-48.

Belsinger and Wilcox provide guidelines for the care and feeding of *Origanum majorana*, *O. xmajoricum* and other plants native to the Mediterranean, with recipes for aggregate mix, meal mix and textured Mediterranean mulch.

* denotes items that circulate to HSA members