There are over 300 species of artemisia—most are herbaceous perennials—though there are some that are annuals, biennials and even subshrubs. These members of the Asteraceae are found in the wild in northern temperate areas, South Africa and South America; many of these plants are invasive. Most artemisias are recognized by their bitter smell and taste, which is due to the presence of thujone, which is a constituent of the volatile oil. Bitter herbs stimulate the digestive tract—they cause the gastric juices to flow—which aids in digestion. Bitterness discourages browsing herbivores. However, there are exceptions like sweet Annie and French tarragon, which have much sweeter aromas due to other dominant chemical constituents and lack of thujone.

Thujone is a ketone; ketones are cyclic compounds which promote tissue formation and help break down mucus in the respiratory tract, however they are potentially neurotoxic and are known for their suspected toxic properties, as well as being abortifacient. Thujone is toxic and can cause convulsions in large doses; it should never be used during pregnancy. Besides the artemisias wormwood and mugwort, thujone is present in other herbs such as tansy, clary sage, sage and thuja (Arbor Vitae). Although the artemisias have been used medicinally throughout history, most of them do not have a GRAS status; those containing thujone are best not ingested or should be used under a healthcare practitioner’s supervision. They can be used externally in small amounts.
**A. abrotanum**  
Southernwood

This perennial herb, called *garderobe* meaning “closet” in French, has long been cultivated for its purported ability to repel moths and insects, as well as contagion. It was used in tussie mussies (little nosegays) and carried outdoors and while traveling to protect from disagreeable odors and infections; it was even used in courtrooms, along with rue, to protect the judge as well as the public from catching jail fever from those kept in prison.

It has been used to expel worms and to alleviate coughs and congestion. In the past in Europe, the new growth of bitter shoots and leaves were harvested to flavor confections, beer and tea. Southernwood does not have GRAS status.

**A. absinthium**  
Wormwood

This is the artemisia of infamy due to its use in absinthe. Sometimes referred to as grand or greater wormwood, its Latin name, *absinthium* was used in times of old. Long used as an anthelmintic, wormwood was taken internally to get rid of worms and parasites. Externally, it was applied to fungal infections like ringworm; it is still used as an antifungal today in preparations for athlete’s foot.

The bitter flavor of wormwood has been employed in making beverages throughout history from bitters, beer, mead to many famous alcoholic spirits and liqueurs from absinthe and vermouth to Benedictine and Drambuie. Absinthe is a distilled spirit made with a high alcohol content (100–to 140-proof) traditionally flavored with the botanicals wormwood, anise and fennel, although different brands might add other herbs. “The Green Fairy” (*la fée verte*) is quite bitter and not usually sweetened so it is not a liqueur, rather a spirit. The customary ritual is to add water to dilute it, often pouring it over a sugar cube, just before imbibing. In the early 1900s, absinthe was banned from
the U.S. and most of Europe because it was believed to cause addiction, hallucinations and convulsions. Studies proved that aside from the high alcohol content, it is not any more dangerous than other spirits and the psychoactive attributes were highly exaggerated. In the late 1990s, the ban was lifted in European countries and by the beginning of the 21st century, U.S. followed suit. Today’s absinthe sold in the U.S. must be thujone-free (maximum 10 ppm).

Regular use of *A. absinthium* can cause restlessness, nausea and convulsions; overdose may result in intoxication, cramps, severe vertigo and delirium. Plant parts are GRAS at 360 ppm; essential oil is GRAS at 60 ppm; extract is GRAS at 170 ppm.

**A. annua**  
**Sweet Annie**

This annual artemisia is sometimes called annual wormwood, sweet wormwood or sweet Annie. It is fragrantly sweet and much used ornamentally to make wreaths; a number of people have allergic reactions to it when exposed to it for any length of time.

Although it has been used for centuries in the East as an anti-malarial, in the 70s, Chinese studies revealed that this herb, which they call *qing hao*, contains artemisinin (*qinghaosu* translates to “the active principle of qing hao) and artemether. These chemicals have been studied and tested since then and have been found to be as effective as quinine in fighting malaria, especially against drug-resistant strains. It is being actively used in Africa and Asia. Currently, studies are underway using the artemisinin from *A. annua* for treating cancer. It has no GRAS status.
**A. dracunculus ‘Sativa’**

French Tarragon

Although we think of tarragon as a culinary herb—and it is the star of French cuisine—it has a long history as a healing plant. It was often used to cure poisonous bites and stings.

According to Dr. James Duke, tarragon has 72 potential cancer preventatives. The main anti-cancer chemical in this artemisia is caffeic acid, which helps the body get rid of damaging free radicals and also has the capacity to kill some viruses, it is an analgesic and anti-inflammatory. Dr. Duke states, “Caffeic acid is one ingredient in tarragon I would seek if I were looking to prevent cancer, flu or herpes.”

For oral or genital herpes, Dr. Duke combines lemon balm with tarragon—both herbs are antiviral—and synergistically make a good-tasting tea. He recommends 3 cups a day steeped for 15 to 20 minutes. Tea bags can be applied directly to herpes blisters. True French tarragon has GRAS status, leaves at 2,731 ppm; essential oil at 441 ppm.

**A. vulgaris**

Mugwort

This fast growing, and spreading perennial should not be placed in the herb garden; it should be put in a spot where it can spread—at the outer perimeter of the garden or field—since it will take off and become invasive. The leaves have been used in many cuisines: it is often used with fatty foods like duck, geese and pork. Leaves and flowers have been added to beer and used as tea. Leaves are cooked as used as a potherb in Japan and added to other dishes. In China, leaves are used with rice dumplings.
It has been used in bitters formulas, it is a digestive and relieves gas and constipation. It was also used as a nervine and made into dream pillows. A beneficial women’s herb—it can used in the bath with other fragrant herbs—women drank the tea to regulate their cycles. In times of old, mugwort was planted along roadsides, so soldiers and travelers could pick the leaves and put them in their shoes as it was reputed for soothing sore feet.

Dried leaves are burned to repel mosquitoes and other insects. They are also dried and rolled into smudge sticks and burned as a smudging ceremony to raise the spirits. Leaves are also dried, aged and rolled into little cones and used for *moxibustion* in Chinese medicine. Along with acupuncture, the *moxa* cones are placed on the meridians, ignited and then allowed to burn down close to the skin. The heat from the mugwort helps to move the energy through the meridians. Mugwort has no GRAS status.

Besides the aforementioned, here are a few artemisias for the ornamental garden. The silver, grey-green foliage and leaf textures and shapes look wonderful with green-leaved herbs and show off every color of flower bloom.

*A. abrotanum* ‘Tangerine’
*A. ludoviciana* ‘Silver King’
*A. ludoviciana* ‘Silver Queen’
*A. ludoviciana* ‘Valerie Finnis’
*A. stelleriana* Beach wormwood
*A. ‘Powis Castle’*