

# The Herb Society of America

## ESSENTIAL FACTS

ARTEMISIA / *Artemisia* spp.



**Family:** Asteraceae (Compositae)

**Botanical Name:** *Artemisia* spp.

**Common Names:** Species-specific

**Life span:** Mostly perennials or tender perennials; rarely annuals

**Hardiness:** Most hardy from Zone 4-10

**Light:** Full sun to light shade

**Soil:** Well-drained; tolerates most; pH 4.9 to 7.5, average 6.9

**Water:** Many are drought tolerant

**Uses:** Culinary, medicinal, beverage, aromatic, industrial

**Propagation:** Cuttings or divisions; seed

### INTRODUCTION

*Artemisias* belong to the Asteraceae, a family of plants which also includes asters and daisies; however, *Artemisia* flowers, though typical, are usually quite small. There are over 300 species in the genus, distinguished by the silkiness and divisions of their leaves and the arrangements of their flowers. With the exception of several species in tropical environs, the genus originated in and mostly belongs to the drier climes of the Northern Hemisphere (Watson, p. 4).

### HISTORY AND LORE

The generic name, *Artemisia*, may have been inspired by Artemis, the Greek goddess of hunting, the moon, and chastity, but it is also possible that it was inspired more directly by Queen Artemisia of Caria (Helicarnassus), a Turkish botanist who lived about 400 B.C.E. (Tucker & DeBaggio, p. 159).

There are various references to *Artemisia* in the Bible as wormwood in both the Old and New Testaments. These may refer to either *A. judaica* or *A. herba-alba*. "...and the third part of the waters became wormwood; and many men died of the waters, because they were made bitter". (Revelation 8:11 King James Version)

*Artemisias* are among the bitterest of herbs due to their thujone content. Because of their bitterness and assumed toxicity, they became associated with sadness, suffering, and misfortune. "Behold I will feed them with wormwood, and make them drink the water of gall..."

(Jeremiah 23:15 KJV)

Historically, *Artemisias* were used as strewing herbs to repel insects. They were also ingested to destroy parasitic worms. Small oral doses of powdered leaves or roots were considered antidotes for mushroom and hemlock poisoning. Other treatments using wormwood included digestive tract cure-alls, women's conditions, fevers, gout, malaria, appetite stimulant, and, according to Dioscorides, intoxication. Native Americans used various species of *Artemisia* to treat worms, sprains, colds, flu, tuberculosis, cancer, fever, asthma, gynecological disorders, rashes, and many other conditions. Some tribes also used them as ceremonial medicines. In modern usage, *Artemisia* continues to be a vermifuge and repellent.

### PLANT CHARACTERISTICS

**Life span:** Depending on the species, *Artemisias* are perennial, tender perennial, or rarely annual.

**Plant form:** Shrub

**Size:** Ranges from small 6 to 8 inch mounds to erect stems and branches reaching up to 10 feet in height. Most garden varieties are between 1 and 4 feet tall with a 3-foot spread.

**Flowers:** Arranged in panicles or umbels; although some are attractive, most are very small, mainly pale yellow to bright yellow, and relatively insignificant.

**Foliage:** Pinnate leaves range from almost filigree to sturdily broad and raggedly erose (irregularly toothed). The leaves of a

number of species are silvery white or gray green, although many are darker green and some are brown-purple. The leaves have fine hairs which cool and defend the plants from extreme heat and help them survive adverse conditions. As in other plants, white varieties are more heat and drought tolerant than their greener cousins.

**Aroma:** Many *Artemisias* are highly fragrant due to the presence of cineole. The aroma of each species is distinctive some camphor-like, clean and refreshing; some spicy and pleasant; some acrid and disagreeable.

**Hardiness:** Hardy as far north as Maine in the U.S. (Zone 5)

**Exposure:** Sun, semi-shade; although most prefer full sun.

**Soil:** *Artemisias* do not like clay or rich soil and cannot stand sodden roots. A well-drained, sunlit spot with a soil in the neutral pH range is ideal.

**Light:** *Artemisias* will not survive deep shade, but can tolerate semi-shade as long as they have several hours of sun a day.

**Drought and moisture tolerance:** A good drink once a week during a drought and none during prolonged rainy periods will keep these plants happy.

**Propagation and pruning:** Propagate from stem tip cuttings or layering. Prune heavily in early spring to maintain a compact form.

**Deer resistance:** Because the fragrance of *Artemisias* can be unpleasant and their taste so bitter, deer, rabbits and other "critters" inherently avoid them.

## HERBAL USES

Not all *Artemisias* are herbal, but those that are have many uses.

**Beverage:** *A. absinthium* (wormwood) is a flavoring ingredient in absinthe liqueur.

**Crafts:** Many *Artemisias* are useful in dried flower arrangements and wreaths, potpourri, and moth and mosquito repellents. To dry easily and rapidly, the branches or stems should be fanned out, not bunched, and hung out of strong sunlight in a dry space with good air circulation.

### Culinary:

*A. dracunculus* (French tarragon) is a key component of Sauce Béarnaise and French salad dressing. The leaves of this species are used to flavor poultry dishes and to make tarragon vinegar. It is important to use a plant grown from a division or cutting rather than from seed.



**Fragrance:** Oils of *Artemisia* are used in cosmetics and aromatherapy.

**Medicinal:** Some species have proven to be antimalarial (*A. annua*), and antifungal (*A. absinthium*).

## TOXICITY

There must be a caveat and caution added to any document describing historical medicinal uses of any herb. These are practices passed down from centuries of use, long ago evaluated and, in many cases, long ago dismissed for their potential to do more harm than good. *Artemisias* can produce allergic reactions, causing rashes and congestion in some individuals merely from handling them, and *Artemisia* pollen is a significant allergen in the U.S. and Europe. However, *Artemisias* still have ongoing potential for medicinal usage in the modern world.

## SOME SPECIES OF NOTE

*A. abrotanum* (southernwood) (also called old man, Lad's love, and maiden's ruin): Southernwood's strongly-scented, graying sage-green leaves arranged in

clusters of uneven lengths were placed in closets as a moth repellent. *A. abrotanum* 'Silver' is a very hairy cultivar.

*A. absinthium* (wormwood): Wormwood can eliminate the common roundworm and has been used against fungal infections of the skin. It is still used in some topical antifungal preparations. It is toxic to mites (Tucker & DeBaggio, pp. 162-63). At one point, absinthe liqueur was banned because it was believed to be hallucinogenic due to its thujone content. At present, low doses of thujone-free wormwood are considered GRAS (generally recognized as safe) (Tucker & DeBaggio, pp. 161-162).

*A. annua* (sweet Annie, sweet wormwood): A large, bushy plant with finely divided strongly-scented leaves. It can cause allergic reactions and headache. The oil of sweet Annie is antimalarial, antifungal, antibacterial, and antioxidant. *A. annua* grows readily from seed and will reseed itself. Its copious foliage and strong fragrance make it popular for dried wreaths. Its pollen can be especially allergenic.

*A. arborescens* (tree wormwood): One parent of *A. 'Powis Castle'*, a very popular grey-white cultivar, *A. arborescens* has been used successfully to treat inflamed skin conditions (Pappas & Sheppard-Hanger).

*A. dracunculus* (tarragon): *Dracunculus* means "little dragon." The Arabic name translates as dragonwort (Tucker & DeBaggio, p. 164). French tarragon (sometimes designated as the cultivar 'Sativa' and preferred for culinary use) is seed sterile and must be grown from stem tip cuttings, root cuttings, or divisions. Tip cuttings are less likely to spread diseases and insects. Tarragon looks fragile but can withstand drought and excessive heat (but not high humidity or poor air circulation). It can also be susceptible to rust and nematodes. Mexican tarragon (*Tagetes lucida*), which is not an *Artemisia*, is sometimes substituted for French tarragon. It grows better than French tarragon in warm,

humid climates but does not have GRAS status. Russian tarragon, which shares the same botanical name as French tarragon, grows vigorously from seed but has a balsamic leather odor and should not be used for flavoring food.

## NOT YET CULTIVATED IN NORTH AMERICA

*A. genipi* (genépi): Growing wild in the Alps of Europe, genépi has a fine odor and is used in some liqueurs, as is *A. glacialis* (genépi des glaciers).

*A. herba-alba* (armoise): Meaning "white herb" in Latin, armoise is primarily used for perfume. It is fragrant, antibacterial, anti-spasmodic and historically interesting.

*A. maritima* (Levant wormseed): Levant wormseed is sometimes used in Middle Eastern cooking.

*A. pallens* (davana): The specific epithet *pallens* refers to its gray foliage. Used to flavor beverages, candies, tobacco, and baked goods, in India for garlands and bouquets, and in folk medicine for diabetes. It is easily propagated from seed (Tucker & DeBaggio, p. 167).

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