

# *Salvia officinalis* L.

Standardized Common Name: Sage

**Other Common Names:** Common Sage, Dalmatian Sage, Garden Sage, Meadow Sage, Red Sage, True Sage

**Family:** Lamiaceae (Labiatae)

**Parts in Commerce:** Leaves

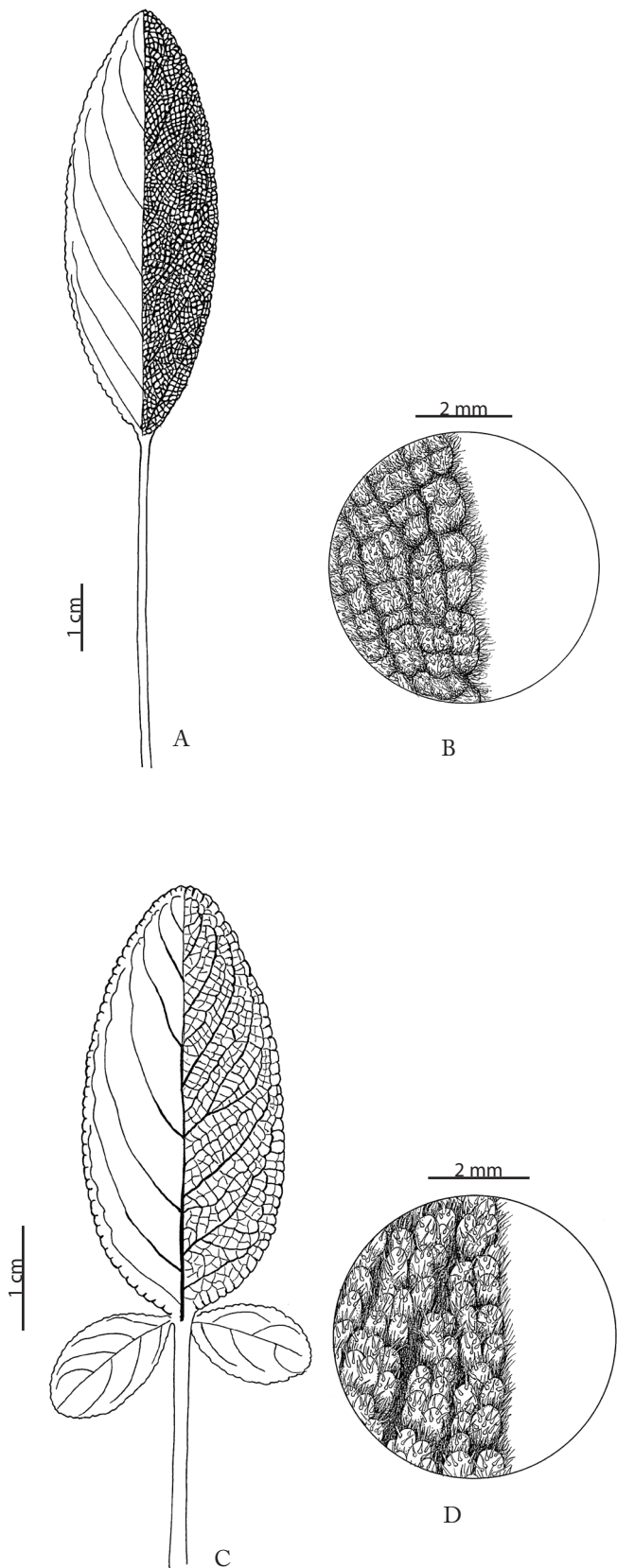
## Identification:

- Lanceolate to oblong or narrowly ovate, 2–7(–10) cm long and (0.6–)1–2(–3) cm broad
- Petiole long (to 4.5 cm), grooved, densely hairy
- Blade becoming narrower near base; base cuneate to slightly rounded, sometimes asymmetrical; not cordate, truncate, nor lobed
- Apex acute, not acuminate
- Surface irregular; areas between netted veins raised on upper surface, veins raised and areas between them sunken on lower surface
- Margins minutely crenulate to nearly entire, not lobed or conspicuously toothed
- Both surfaces very hairy, with short slightly crinkly white hairs, also with glandular trichomes appearing under dissecting microscope as glistening yellowish to orange-red dots
- Upper surface green, with tufts of hair and 1–several glandular hairs on each raised area, almost hairless over veins
- Lower surface pale green or gray-green; midrib and secondary veins whitish, prominent; pubescent throughout, especially over veins, also with numerous glandular hairs
- Any stem fragments quadrangular, pubescent with short white hairs
- Odor characteristic, aromatic
- Taste bitter, aromatic, astringent

**Adulterants:** *S. fruticosa* Mill. (also often called *S. triloba* L.f.), which is cultivated and marketed as Three-lobe Sage or Greek sage, has often been found in European commercial sage. It has a harsher odor, which has been said to resemble that of spike lavender, and contains much less thujone than *S. officinalis*. Most of the foliar characteristics of *S. officinalis* apply to *S. fruticosa* as well. Its leaves are sometimes, though not always, pinnately compound, having a single large lanceolate terminal leaflet with 2–4 much smaller leaflets or lobes at its base. Its long non-glandular hairs become thicker at the base than those of *S. officinalis*, in which the hairs, only a few micrometers thick, remain slender all the way to the base. The lower surface may be so densely pubescent that it appears white to the naked eye, whereas that of *S. officinalis* typically appears pale green or grayish. Several pharmacognostic references state that the leaf of *S. officinalis* is commonly lobed at the base, but this may be due to widespread inclusion of *S. fruticosa*, because the leaves of *S. officinalis* (sensu stricto) are not normally lobed.

*Salvia tomentosa*, called “balsamic sage,” is reportedly confused with *S. officinalis* in Eastern Europe, where both may be grown (and it is considered by some to represent the same species). The leaves of *S. tomentosa* are sometimes ovate and relatively broader than those of *S. officinalis*, up to 5 cm broad; the base is rounded to cordate, and occasionally may have small basal lobes similar to those of *S. fruticosa*. One publication (St. Chakalova et al.) has stated that the large majority of the glandular hairs of *S. tomentosa* were on the lower leaf surface, with less than 1 gland per square mm on the upper surface and several times that on the lower surface, whereas the glandular hairs of cultivated *S. officinalis* were more evenly distributed. Also, whereas *S. officinalis* may have glandular hairs with either one- or two-celled stalks, *S. tomentosa* had only glandular hairs with one-celled stalks; a light microscope and preparation of leaf sections on slides would be necessary to observe this feature. However, those data were based upon limited samples and are not necessarily applicable to other populations of the same species.

***S. lavandulifolia* Vahl:** This taxon might well be properly lumped into *S. officinalis* as subsp. *lavandulifolia* (Vahl) Gams. The leaves are narrowly oblong to linear, 4–10 mm broad, and do not exceed 5 cm in length. The pubescence is longer and denser, particularly on the lower surface, which is so densely hairy that it appears whitish and the smaller veins and glands may be virtually obscured, as in



**Figure 62:** a–b, *Salvia officinalis* leaf and close-up of lower surface; c–d, *S. fruticosa* leaf and close-up of lower surface.

*S. triloba*; occasionally the midrib and secondary veins are less hairy and stand out as darker.

**Taxonomy:** The genus *Salvia* is of worldwide distribution and includes some 500–900 species. *Salvia officinalis* is placed within Sect. *Salvia*. It is widespread and variable, and its separation from other species is sometimes unclear. *S. tomentosa* Mill. is sometimes considered to be synonymous with *S. officinalis*, and a Spanish sage given specific status by some authors as *S. lavandulifolia* Vahl is frequently treated as a subspecies, variety, or series of forms of *S. officinalis*. The strictest definition of *S. officinalis* (otherwise known as subsp. or var. *officinalis*) is accepted here, although intermediate forms between *S. officinalis* and *S. lavandulifolia*, which is highly variable and has a complex synonymy of its own, suggest that the two may not really be distinct.

**Description:** Perennial shrub. Stems to 60 cm high, much-branching, pubescent. Leaves opposite, crowded on branches, long-petioled, oblong to lanceolate or narrowly ovate, 2–7(–10) cm long, (0.6–)1–2(–3) cm broad, densely pubescent and glandular-punctate; base more or less cuneate; apex acute to obtuse; margins entire to crenulate. Inflorescence an interrupted spike of verticillasters, each 5–10-flowered, flowers subtended by short bracts. Calyx bilabiate, 10–14 mm long, with acuminate or narrowly acute triangular teeth, green or purplish, sparsely pubescent at base and along veins, glandular-pubescent throughout. Corolla bilabiate, 20–25(–35) mm long, blue to pink or white; upper lip 2-lobed, arched; lower lip 3-lobed, the central lobe largest. Stamens 2. Fruit 4 nutlets.

#### References:

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