

## 71. *PERILLA* Linnaeus, Gen. Pl., ed. 6, 578. 1764.

紫苏属 *zi su shu*

Herbs aromatic, annual. Leaves dentate. Verticillasters 2-flowered, in terminal and axillary secund racemes; bracts broadly ovate to subcircular. Flowers pedicellate. Calyx campanulate, 10-veined, straight in flower, enlarged, spreading or pendulous, swollen on 1 side in fruit, throat pilose annulate, limb 2-lipped, upper lip 3-toothed, with middle tooth smallest, lower lip 2-toothed, teeth lanceolate. Corolla white to purple-red, campanulate, throat oblique; limb nearly 2-lipped, upper lip emarginate; lower lip 3-lobed, lateral lobes smaller than middle, similar to upper lip. Stamens 4, subequal or anterior 2 longer, erect, separate; anther cells 2, parallel, becoming divergent or divaricate. Style included, apex 2-cleft; lobes subequal, subulate. Nutlets subglobose, netted.

Monotypic: Asia.

**1. *Perilla frutescens*** (Linnaeus) Britton, Mem. Torrey Bot. Club 5: 277. 1894.

紫苏 *zi su*

Herbs erect. Stems 0.3–2 m tall, green or purple, finely pilose or densely villous. Petiole 3–5 cm; leaf blade broadly ovate to circular, 4.5–13×2.8–10 cm, green, purplish, or purple-black, pilose or adaxially pilose, abaxially appressed villous, base rounded to broadly cuneate, margin narrowly to coarsely serrate, apex short acuminate or mucronate. Verticillasters 1.5–15 cm, densely villous; bracts ca. 4×4 mm, short acuminate, red-brown glandular. Pedicel ca. 1.5 mm, densely villous. Calyx ca. 3 mm, erect, base villous, yellow glandular, lower lip longer than upper lip; fruiting calyx 4–11 mm, base villous or pilose, glandular. Corolla 3–4 mm, slightly puberulent, tube 2–2.5 mm. Nutlets gray-brown or tawny, 1–1.5 mm in diam. Fl. Aug–Nov, fr. Aug–Dec.

Waste areas, cultivated in gardens. Fujian, Guangdong, Guangxi, Guizhou, Hebei, Hubei, Jiangsu, Jiangxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, Cambodia, India, Indonesia (Java), Japan, Korea, Laos, Vietnam].

- 1a. Leaves strongly narrow serrate, purple  
..... 1c. var. *crispa*
- 1b. Leaves coarsely serrate, sometimes green at least adaxially.
  - 2a. Fruiting calyx to 1.1 cm, base villous; stem densely villous; leaves broadly ovate to circular, 7–13×4.5–10 cm, adaxially pilose, abaxially appressed villous; nutlets gray-brown, ca. 1.5 mm in diam. .... 1a. var. *frutescens*
  - 2b. Fruiting calyx 4–5.5 mm, base pilose; stem finely pilose; leaves ovate, 4.5–7.5×2.8–5 cm, pilose; nutlets tawny, 1–1.5 mm in diam.  
..... 1b. var. *purpurascens*

### **1a. *Perilla frutescens* var. *frutescens***

紫苏 *zi su*

*Ocimum frutescens* Linnaeus, Sp. Pl. 2: 597. 1753; *Melissa cretica* Loureiro; *Melissa maxima* Arduino; *Mentha perilloides* Lamarck; *Perilla avium* Dunn; *P. ocymoides* Linnaeus; *P. urticaefolia* Salisbury.

Stems densely villous. Leaves broadly ovate to orbicular, 7–13×4.5–10 cm, green or purple, adaxially pilose, abaxially appressed villous, margin coarsely serrate. Fruiting calyx to 1.1 cm, base villous, glandular. Nutlets gray-brown, ca. 1.5 mm in diam.

Widely cultivated in China [Bhutan, Cambodia, India, Indonesia (Java), Japan, Korea, Laos, Vietnam].

Seeds are a source of perilla oil, a drying oil resembling linseed oil, which is used in waterproofing paper, manufacturing cheaper lacquer varnishes, printing ink, and painting. Leaves are used for flavoring dishes in India and China.

**1b. *Perilla frutescens* var. *purpurascens*** (Hayata) H. W. Li, Acta Bot. Yunnan. 13: 350. 1991.

野生紫苏 *ye sheng zi su*

*Perilla ocymoides* Linnaeus var. *purpurascens* Hayata, Icon. Pl. Formos. 8: 103. 1919; *Ocimum acutum* Thunberg; *P. albiflora* Odashima; *P. frutescens* var. *acuta* (Thunberg) Kudô; *P. shimadae* Kudô.

Stems finely pilose. Leaves ovate, 4.5–7.5×2.8–5 cm, pilose. Fruiting calyx, 4–5.5 mm, base pilose, glandular. Nutlets tawny, 1–1.5 mm in diam.

Waste areas, cultivated in gardens. Fujian, Guangdong, Guangxi, Guizhou, Hebei, Hubei, Jiangsu, Jiangxi, Shanxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Japan].

**1c. *Perilla frutescens* var. *crispa*** (Benth) Deane ex Bailey, Manual Cult. Plants, Ed. 1: 646. 1924.

回回苏 *hui hui su*

*Perilla ocymoides* Linnaeus var. *crispa* Benth, Prodr. 12: 164. 1848; *Dentidia nankinensis* Loureiro; *D. purpurascens* Persoon; *D. purpurea* Poiret; *Mentha reticulosa* Hance; *Ocimum crispum* Thunberg; *Perilla arguta* Benth; *Perilla frutescens* var. *arguta* (Benth) Handel-Mazzetti; *Perilla frutescens* var. *crispa* (Thunberg) Handel-Mazzetti (1939); *Perilla frutescens* var. *nankinensis* (Loureiro) Britton; *Perilla frutescens* var. *crispa* Deane; *Perilla nankinensis* (Loureiro) Decaisne; *Plectranthus nankinensis* (Loureiro) Sprengel.

Leaves narrowly serrate, purple.

Widely cultivated in China [Japan].

Leaves and flower clusters used as a condiment or salted and eaten. Leaves give a purplish red tint to salted fruits of *Prunus mume*. Cotyledons of seedlings also used as a condiment.

The nomenclature of this taxon is complex and depends on the interpretation of Bailey (1924). The oldest epithet at the specific rank is *Ocimum crispum* Thunberg (1784). The oldest epithet at the varietal rank is *Perilla ocymoides* var. *crispa* Benth (1848) which is based on different material. This epithet should have been taken up by Britton (1894) who cited Benth's taxon under his *Perilla frutescens* var. *nankinensis* based on *Dentidia nankinensis* Loureiro (1790), thus making that name illegitimate. Bailey ascribes the name taken up to Deane who gives a description and cites "var. *nankinensis* Bailey." It seems best to accept this as a reference to var. *nankinensis* Britton and thus indirectly to Benth. If this is not done, then Deane's name must be accepted as new and ascribed directly to him.

