

18. SYMPHYTUM Linnaeus, Sp. Pl. 1: 136. 1753.

聚合草属 ju he cao shu

Herbs perennial. Roots thickened, hispid or strigose. Stem leaves sometimes decurrent. Cymes terminal, becoming paniculate, bracteate. Calyx 5-parted to middle or below; lobes unequal, slightly elongated in fruit. Corolla light purple-red, rarely yellow, tubular-campanulate; throat appendages 5, lanceolate, with papillate glands; limb 5-lobed; lobes triangular to semiorbicular, margin dentate, apex sometimes revolute. Stamens inserted at throat, not exerted; anthers linear-oblong. Ovary 4-parted. Style filiform, usually exerted; stigma capitate. Gynobase flat. Nutlets ovoid, sometimes suboblique, usually granular-tuberculate, reticulate-wrinkled, rarely smooth; attachment scar at base, cupular, finely dentate at margin.

About 20 species: Asia, Europe, cultivated worldwide; one species in China.

1. *Symphytum officinale* Linnaeus, Sp. Pl. 1: 136. 1753.

聚合草 ju he cao

Herbs forming tussocks, 30–90 cm tall, arcuate hispid, short strigose. Main roots purplish brown, stout. Stems erect or ascending, branched. Basal leaves long petiolate, lorate-lanceolate to ovate, 30–60 × 10–20 cm, apex acuminate; middle and upper stem leaves sessile, smaller, base decurrent. Inflorescences many flowered. Calyx parted nearly to base; lobes lanceolate, apex acuminate. Corolla light purple, purple-red, or yellowish white, 1.4–1.5 cm; throat appendages ca. 4 mm, not exerted beyond limb; lobes triangular, apex revolute. Filaments ca. 3 mm; lower part nearly as wide as anthers; anthers ca. 3.5 mm, apex with somewhat prominent connective. Ovary usually sterile, occasionally only 1 mericarp develops in a few flowers. Nutlets black, oblique ovoid or ovoid, 3–4 mm, smooth, shiny. Fl. May-Oct. $2n = 24 + 0-4b, 26, 32-45^*, 46-48, 56$.

Forests. Fujian, Hebei, Liaoning, Taiwan, Xinjiang [Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Uzbekistan; Europe].

This species was introduced in China in 1963 as green forage for livestock.

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