

3. MOLLUGO Linnaeus, Sp. Pl. 1: 89. 1753.

粟米草属 su mi cao shu

Herbs annual or perennial, glabrous. Stems diffuse, decumbent, or erect, branched or not, sometimes absent. Leaves in a basal rosette, pseudoverticillate, opposite, or whorled, ± sessile, margin entire. Inflorescences terminal or seemingly leaf-opposed cymes or umbels. Flowers pedicellate. Tepals 5, rarely 4, free, herbaceous, often with transparent scarious margins. Stamens usually 3(-5), rarely more (6-10). Carpels 3(-5), connate; ovary superior, ovoid or ellipsoid, 3(-5)-loculed, each locule with many ovules on axile placenta. Styles 3(-5), linear. Capsule globose, membranous, 3(-5)-valved, loculicidal, with persistent tepals. Seeds numerous, reniform or D-shaped, smooth, sculptured, or raphe ribbed, without filiform arils or caruncles; embryo annular.

About 35 species: mostly in tropical and subtropical regions, extending into warm-temperate regions of Europe, E Asia, and North America; four species in China.

- 1a. Plant stemless; inflorescences arising from a rosette of persistent basal leaves 1. *M. nudicaulis*
- 1b. Plant with leafy stem; inflorescences terminal or seemingly axillary, basal leaves usually soon drying up.
 - 2a. Plant 7-8 cm; leaves linear; seeds D-shaped, reticulate 2. *M. cerviana*
 - 2b. Plant 10-30 cm; leaves not linear; seeds reniform, smooth or tuberculate.
 - 3a. Stem leaves lanceolate or linear-lanceolate; inflorescence a terminal cyme appearing leaf-opposed; seeds tuberculate 3. *M. stricta*
 - 3b. Stem leaves oblanceolate or linear-oblanceolate; inflorescence seemingly an axillary umbellate cluster; seeds smooth 4. *M. verticillata*

1. *Mollugo nudicaulis* Lamarck, Encycl. 4: 234. 1786.

无茎粟米草 wu jing su mi cao

Herbs acauline. Leaves all in a basal rosette, sessile; leaf blade elliptic-spatulate or obovate-spatulate, 1-5 × 0.8-1.5 cm, base attenuate, apex obtuse. Inflorescence a dichasium arising from a rosette of basal leaves, spreading; peduncle and pedicel wiry, stiff. Tepals 5, yellowish white, oblong, 2-3 mm. Stamens 3-5. Ovary subglobose, 3-loculed; stigmas 3, very short. Capsule subovoid or ellipsoid, ca. as long as persistent tepals. Seeds numerous, black, subreniform, granulose, 0.5-0.7 mm. Fl. and fr. almost year-round. $2n = 54$.

Sandy seashores, open places, ruderal of sandy soils; low elevations. Guangdong, Hainan [Afghanistan, India, Pakistan; tropical Africa, W Indies (Cuba), Pacific Islands (New Caledonia)].

2. *Mollugo cerviana* (Linnaeus) Seringe in Candolle, Prodr. 1: 392. 1824.

线叶粟米草 xian ye su mi cao

Pharmaceum cerviana Linnaeus, Sp. Pl. 1: 272. 1753.

Herbs small, to 8 cm. Root thin. Stems numerous, ascending, thin, stiff. Leaves sessile, basal leaves in a rosette; cauline leaves in pseudowhorls of 3-10, gray-green, linear, 5-10 × 0.3-0.5 mm, apex acute. Inflorescences terminal or seemingly axillary, trichotomous umbellate cymes. Pedicel 7-8 mm, thin, stiff. Tepals 5, elliptic to oblong, 2-2.5 mm, midvein green, margin white membranous. Stamens 3-5, shorter than tepals. Styles 3, short. Capsule broadly ellipsoid, ca. as long as tepals or slightly shorter. Seeds numerous, brown, slightly shiny, D-shaped, ca. 0.2 mm, reticulate. Fl. Jun-Jul. $2n = 18$.

Dry sands, roadsides, shady and wet fields; 400-1200 m. Hebei, Xinjiang [India, Kazakhstan, Mongolia, Myanmar, Sri Lanka; Africa, S to SE Asia, Australia, S Europe].

This species is used medicinally. It is a very inconspicuous and easily overlooked ephemeral.

3. *Mollugo stricta* Linnaeus, Sp. Pl., ed. 2, 1: 131. 1762.

粟米草 su mi cao

Herbs diffuse, 10-30 cm. Stems ascending, slender, much branched, angled, glabrous, when old often reddish brown.

Leaves in pseudowhorls of 3–5 or opposite; petiole short or leaves sessile; leaf blade lanceolate or linear-lanceolate, 1.5–4 cm × 2–7 mm, base attenuate, apex acute or acuminate; midvein prominent. Inflorescences terminal or in seemingly leaf-opposed lax cymes; peduncle slender. Pedicel 1.5–6 mm. Tepals 5, greenish, elliptic or orbicular, 1.5–2 mm, veins reaching 2/3, margin membranous. Stamens 3. Ovary broadly elliptic or rotund, 3-loculed; styles 3, linear, short. Capsule subglobose, ca. as long as persistent tepals, 3-valved. Seeds numerous, chestnut-colored, reniform, tuberculate. Fl. Jun–Aug, fr. Aug–Oct. $2n = 18^*$, 36.

Open waste places, sands of seashores, farmlands; 100–1800 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [tropical and subtropical Asia].

In past Chinese literature, this species was erroneously reported as *Mollugo pentaphylla* Linnaeus.

This species is used medicinally.

4. *Mollugo verticillata* Linnaeus, Sp. Pl. 1: 89. 1753.

种稜粟米草 zhong leng su mi cao

Mollugo costata Y. T. Chang & C. F. Wei.

Herbs erect or diffuse, 10–30 cm. Petiole short or leaves sessile; basal leaves in a rosette, obovate or obovate-spatulate, 1.5–2 cm; stem leaves in pseudowhorls of 3–7, or 2 or 3 in groups on one side of node, oblanceolate or linear-oblanceolate, 1–3 cm × 1.5–4(–8) mm, yellowish green when dry, base narrowly cuneate, apex acute or obtuse. Inflorescences axillary, umbellate clusters, 3–5-flowered. Pedicel 3–5 mm, slender. Tepals 5, rarely 4, imbricate, pale or greenish white, oblong or ovate-oblong, 2.5–3 mm, margin membranous, apex acute. Stamens (2 or)3(–5). Ovary 3-loculed; styles 3. Capsule ellipsoid or subglobose, 3–4 × ca. 2.5 mm, pericarp membranous, 3-valved, apex with persistent styles, persistent tepals surrounding more than half. Seeds numerous, chestnut-colored, shiny, reniform, smooth, raphe with 3–5 arcuate ribs, between ribs with fine and closely transverse grains. Fl. and fr. autumn–winter.

Barren grasslands, dry farmlands; near sea level. Fujian, Guangdong, Guangxi, Hainan, Shandong, Taiwan [Japan; tropical America, S Europe].

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