

42. PETROSIMONIA Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Ser. 7, 4(11): 19, 52. 1862.

叉毛蓬属 cha mao peng shu

Herbs annual, ephemeral, appressed sericeous-villous, rarely glabrous. Stem much branched, terete. Leaves sessile, linear, terete or semiterete, apex acute or acuminate. Flowers axillary, solitary, bisexual, with 2 navicular, embracing bractlets. Perianth segments 2, 3, or 5, narrowly ovate-lanceolate to elliptic, slightly enlarged in fruit, membranous or papery, proximally becoming leathery and adaxially concave, without an appendage, veinless, glabrous or abaxially slightly hairy near apex. Stamens 1–5, inserted on an obscure disk; filaments compressed; anthers oblong or sagittate, exerted from perianth; connective protruding, becoming a thickened, solid appendage. Ovary broadly ovoid, compressed; ovule subsessile; style cylindrical; stigmas 2, filiform. Utricle enclosed in perianth, ovate or broadly oblong; pericarp membranous or thinly papery, slightly fleshy distally, glabrous, not adnate to seed. Seed vertical, globose or subglobose, compressed; testa membranous; embryo planospiral; perisperm absent.

Between 11 and 15 species; C and SW Asia, SE Europe; four species in China.

- 1a. Branches and leaves all opposite; perianth segments 5 1. *P. sibirica*
- 1b. Branches and leaves opposite below, alternate above; perianth segments 2 or 3.
 - 2a. Branches and leaves opposite, except apical ones (in inflorescence) alternate; plants densely pubescent with long, semiappressed hairs 2. *P. squarrosa*
 - 2b. Branches and leaves opposite only on lower stem, all others alternate; plants pubescent with short, appressed hairs or subglabrous.
 - 3a. Plants blue-gray; lower branches suberect; bracts recurved or reflexed at apex, all longer than subtended flower 3. *P. glaucescens*
 - 3b. Plants reddish or yellowish green; lower branches prostrate; bracts erect, upper ones shorter than subtended flower 4. *P. oppositifolia*

1. Petrosimonia sibirica (Pallas) Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Ser. 7, 4(11): 60. 1862.

叉毛蓬 cha mao peng

Polycnemum sibiricum Pallas, Ill. Pl. 61. 1803; *Halimocnemis sibirica* (Pallas) C. A. Meyer.

Plants 15–40 cm tall, densely pilose. Stem simple or branched from base, erect or decumbent; branches all opposite, obliquely spreading. Leaves all opposite, linear, usually appearing slightly sickle-shaped, semiterete, 1–3.5 cm × 1–1.5 mm, adaxially plane or sulcate, base slightly expanded, expanded part usually becoming leathery in fruit, apex acuminate. Bractlets navicular, margin membranous, apex subulate, recurved. Perianth segments 5, membranous, outer 3 elliptic-ovate, inner 2 lanceolate, slightly shorter than or equaling bractlets, proximally thickened and becoming leathery in fruit, abaxially villous near apex, apex acuminate. Stamens 5; filaments exerted from perianth, compressed, ca. 2 × as long as perianth; anthers purple-red or orange-red, ca. 2.5 mm; appendage apex 2-toothed. Stigmas equaling style. Utricle light yellow, broadly ovate; pericarp distally slightly fleshy. Seed vertical, subglobose, compressed, ca. 1.5 mm in diam. Fl. and fr. Jul–Sep.

Gobi desert, saline-alkaline deserts, arid slopes. N Xinjiang [Russia (S Siberia); C Asia].

2. Petrosimonia squarrosa (Schrenk) Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Ser. 7, 4(11): 57. 1862.

粗糙叉毛蓬 cu cao cha mao peng

Halimocnemis squarrosa Schrenk, Bull. Cl. Phys.-Math.

Acad. Imp. Sci. Saint-Pétersbourg 1: 360. 1843.

Plants grayish, 5–15 cm tall, densely pubescent with long, semiappressed hairs. Stem simple or branched from base, erect or slightly decumbent, slender, terete; branches opposite, except apical ones (in inflorescence) alternate, obliquely spreading. Leaves opposite, except alternate on apical branches, linear, slightly recurved, semiterete, 0.5–1 cm × ca. 1 mm, base slightly expanded, apex acuminate. Bractlets slightly longer than perianth, apex acute. Perianth segments 3, ovate-elliptic, ca. 2.5 mm, membranous, abaxially hairy near margin and apex. Stamens 3(or 4); anthers free in proximal 1/5, 1.5–1.75 mm; appendage very short, slightly 2-lobed. Stigmas subequaling style.

Gobi desert, terraces, ravine banks. N Xinjiang [Kazakhstan; C and SW Asia].

3. Petrosimonia glaucescens (Bunge) Iljin, Mater. Komiss. Éksped. Issl. 26: 280. 1930.

灰绿叉毛蓬 hui lu cha mao peng

Petrosimonia crassifolia (Pallas) Bunge var. *glaucescens* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Ser. 7, 4(11): 56. 1862; *Polycnemum glaucum* Pallas.

Plants blue-gray, 10–20 cm tall, hairy to subglabrous. Stem erect, much branched; lower branches suberect, usually lower 1–3 pairs opposite; other branches obliquely spreading. Leaves opposite on lower branches, alternate on upper branches, linear, mostly recurved, semiterete or subterete, usually 1–4 cm × 1–1.5 mm, base slightly expanded, apex acuminate. Bracts distinctly recurved or reflexed, 5–10 mm, shorter than leaves, all longer than subtended flower. Bractlets navicular,

equaling or slightly longer than perianth, apex shortly acuminate, recurved. Perianth segments 2, elliptic or narrowly ovate, ca. 2.5 mm, membranous, somewhat hardened in fruit, abaxially slightly hairy at margin and near apex, apex subobtuse or acute. Stamens 5; anthers free in proximal ca. 1/3, 2–2.5 mm including appendage; appendage ca. 0.4 mm, apex usually 3-lobed, appendages attached by lateral margins making joined anthers umbrella-shaped. Stigmas subequaling style. Fl. and fr. Jul–Sep.

Dunes, saline-alkaline deserts. N Xinjiang [Kazakhstan, Russia (SE European part); SW Asia (Caucasus)].

4. *Petrosimonia oppositifolia* (Pallas) Litvinov, Spisok Rast. Gerb. Russk. Fl. Bot. Muz. Imp. Acad. Nauk 7: 13. 1911.

对生叶叉毛蓬 dui sheng ye cha mao peng

Polycnemon oppositifolium Pallas, Reise Russ. Reich. 1: 484. 1771; *Halimocnemis crassifolia* (Pallas) C. A. Meyer; *H. oppositifolia* (Pallas) Eichwald; *Petrosimonia crassifolia* (Pallas) Bunge; *Polycnemon crassifolium* Pallas.

Plants reddish or yellowish green, 5–40 cm tall, appressed hairy to subglabrous. Stem erect, much branched; lower branches prostrate, usually lower 1–3 pairs opposite. Leaves opposite on lower branches, alternate on upper branches, erect, linear, semiterete or subterete, base dilated, apex acuminate. Bracts erect, shorter than leaves, upper ones shorter than subtended flower, base strongly dilated. Bractlets constricted, laterally gibbous, subequaling subtended flower. Perianth segments 2, membranous, cartilaginous in fruit, glabrous, apex acuminate. Stamens 5; anther appendage scarious, (2 or)3-toothed, lateral teeth usually larger than the central one. Stigmas equaling style in fruit. Fl. and fr. Jul–Sep.

Dunes, saline-alkaline deserts. N Xinjiang [C Asia, SW Asia (Caucasus), SE Europe].

