

29. GYPSOPHILA Linnaeus, Sp. Pl. 1: 406. 1753.

石头花属 shi tou hua shu

Lu Dequan (鲁德全); Nicholas J. Turland

Heterochroa Bunge; *Psammophila* Fourreau; *Psammophiliella* Ikonnikov; *Timaeosia* Klotzsch.

Herbs annual or perennial. Stems usually caespitose, erect or diffuse, glabrous or glandular pubescent, sometimes glabrescent or base woody. Leaves opposite, linear, lanceolate, ovate, oblong, spatulate, or sometimes subulate or subfleshy. Flowers numerous, bisexual, small, borne in dichasial cymes, corymbs, or panicles, sometimes aggregated into capitula; bracts usually scarious, rarely leaflike. Calyx green or purple veined, white membranous between veins, campanulate or funnelform, rarely cylindric, glabrous or puberulous, veins broad, apex 5-toothed. Petals 5, white or pink, sometimes purple veined, oblong or obovate, longer than calyx, base usually cuneate, apex entire, truncate, or retuse. Stamens 10. Ovary globose or ovoid, 1-loculed; ovules numerous. Styles 2(or 3). Gynophore absent. Capsule globose, ovoid, or oblong, 4-valved. Seeds subreniform, compressed, tuberculate; hilum lateral; embryo annular; radicle prominent.

About 150 species: mainly in temperate Asia and Europe, fewer species in NE Africa (Egypt), Australia, and North America; 17 species (four endemic) in China.

Gypsophila elegans Marschall von Bieberstein, native to SW Asia and SE Europe, is cultivated in China as an ornamental.

- 1a. Herbs annual 17. *G. muralis*
1b. Herbs perennial.
2a. Stems densely caespitose, ascending; bracts leaflike; calyx not white membranous between veins.
3a. Plants white pubescent; leaves obovate-spatulate 14. *G. cerastioides*
3b. Plants brown glandular pubescent or sericeous; leaves linear-subulate or lanceolate.
4a. Plants brown glandular pubescent; leaves linear-subulate; pedicels 0.3–1.2 cm 15. *G. desertorum*
4b. Plants sericeous; leaves lanceolate; pedicels 1.4–2 cm 16. *G. sericea*
2b. Stems simple or laxly caespitose, erect; bracts scarious; calyx white membranous between veins.
5a. Inflorescence paniculate, spreading, many branched, pedicels slender; calyx broadly campanulate.
6a. Leaves lanceolate or linear-lanceolate, 0.25–0.7 cm wide, glabrous; calyx 1.5–2 mm, veins purple 12. *G. paniculata*
6b. Leaves obovate- or ovate-oblong, 1–3 cm wide, glandular pubescent; calyx 2–4 mm, veins green 13. *G. perfoliata*
5b. Inflorescence usually corymbose, sometimes subcapitate, pedicels usually stout, rigid; calyx campanulate or narrowly so.
7a. Leaves linear.
8a. Inflorescence few branched or subcapitate, few flowered.
9a. Inflorescence lax, pedicels 5–20 mm; calyx 2–3 mm 8. *G. patrinii*
9b. Inflorescence subcapitate, pedicels ca. 1 mm; calyx 3.5–5 mm 9. *G. capituliflora*
8b. Inflorescence many branched, numerous flowered.
10a. Inflorescence lax, divergent spinose 11. *G. spinosa*
10b. Inflorescence congested, not spinose 10. *G. licentiana*
7b. Leaves not linear.
11a. Leaves linear-lanceolate.
12a. Plants more than 50 cm tall; inflorescence many branched; calyx veins green 6. *G. davurica*
12b. Plants less than 50 cm tall; inflorescence few branched; calyx veins purple-brown.
13a. Inflorescence lax, few flowered, pedicels 5–15 mm; calyx 3–5 mm, lobes acuminate; stamens and styles included; seeds obtusely tuberculate ... 4. *G. tschiliensis*
13b. Inflorescence subcapitate, numerous flowered, pedicels 2–3 mm; calyx 2–3 mm, lobes obtuse; stamens and styles exerted; seeds acutely tuberculate 5. *G. huashanensis*
11b. Leaves linear-oblancheolate, oblong, or ovate.
14a. Leaves linear-oblancheolate.
15a. Plants 50–80 cm tall; inflorescences scattered, pedicels 2–5 mm; bracts and calyx lobes ciliate at margin; seeds acutely tuberculate 1. *G. altissima*

- 15b. Plants 20–50 cm tall; inflorescences concentrated into capitula, pedicels 0.5–2.5 mm; bracts and calyx lobes undulate at margin, not ciliate; seeds truncately tuberculate 2. *G. cephalotes*
- 14b. Leaves oblong or ovate.
- 16a. Leaves oblong; inflorescence dense, pedicels 2–5 mm; petal apex truncate or retuse; stamens and styles longer than petals 3. *G. oldhamiana*
- 16b. Leaves ovate; inflorescence spreading, pedicels 5–10 mm; petal apex rounded; stamens and styles shorter than petals 7. *G. pacifica*

1. *Gypsophila altissima* Linnaeus, Sp. Pl. 1: 407. 1753.

高石头花 gao shi tou hua

Herbs perennial, 50–80 cm tall. Roots thick, 0.5–1.5 cm in diam. Stems usually solitary, sometimes 2 or 3 together, erect, distally branched, glandular pubescent. Leaves sessile, glaucous, linear-oblong, 1.5–8 cm × 3–12 mm, midvein prominent, base attenuate, apex subobtusely or acute; proximal leaves longer than distal ones. Corymbose cymes scattered; bracts ovate, base attenuate, margin membranous, ciliate, apex acute. Pedicel 2–5 mm, glabrous. Calyx campanulate, 2–3 × ca. 1.5 mm; lobes ovate, margin ciliate, apex rounded. Petals white or pink, obovate-oblong, apex retuse. Stamens shorter than or equaling petals. Capsule globose, slightly longer than calyx, 2–2.5 mm in diam. Seeds ca. 1 mm, acutely tuberculate. Fl. Jun–Jul, fr. Jul–Aug.

Mountain slopes, valley grasslands, floodlands, ditches; 1300–2400 m. NW Xinjiang [Kazakhstan, Russia (Siberia); Europe].

2. *Gypsophila cephalotes* (Schrenk) F. N. Williams, J. Bot. 27: 323. 1889.

膜苞石头花 mo bao shi tou hua

Gypsophila fastigiata Linnaeus var. *cephalotes* Schrenk in Fischer & C. A. Meyer, Enum. Pl. Nov. 1: 92. 1841.

Herbs perennial, 20–50 cm tall. Roots thick, 3–15 mm in diam. Stems several, caespitose, rarely solitary, erect, branched, distally glandular pubescent. Leaves linear-oblong, 3–6 cm × 3–8 mm, apex obtuse. Corymbose cymes concentrated into subcapitate clusters; peduncle 1–4 cm; bracts lanceolate, margin undulate, membranous, apex acuminate. Pedicel 0.5–2.5 mm, glabrous. Calyx purple, campanulate, 2.5–3 mm, divided for ca. 1/2 its length; lobes slightly undulate and membranous at margin, apex obtuse. Petals white, obovate-oblong, ca. 6 × 1 mm, apex truncate or retuse. Stamens longer than petals. Ovary obovoid, ca. 2 mm. Styles ca. 4 mm, shorter than stamens. Capsule globose, 3–4 mm. Seeds brown, compressed globose, ca. 1.5 mm, truncately tuberculate. Fl. Jun–Aug, fr. Jul–Sep.

Mountain slope grasslands; 1000–3900 m. N Xinjiang [NE Afghanistan, Kazakhstan, W Mongolia, N Pakistan, Russia (W Siberia)].

3. *Gypsophila oldhamiana* Miquel, Ann. Mus. Bot. Lugduno-Batavi 3: 187. 1867.

长蕊石头花 chang rui shi tou hua

Herbs perennial, 60–100 cm tall. Roots brownish or brown-gray, thick, woody. Stems several, arising from root crown, dichotomously or trichotomously spreading branched, usually purple-red when mature. Leaves oblong, 4–8 × 0.5–1.5 cm, thick, subfleshy, 3–5-veined, midvein prominent, base connate into a short sheath, apex apiculate. Corymbose cymes terminal or axillary, dense, glabrous; bracts ovate-lanceolate, membranous, margin ciliate, apex caudate-acuminate. Pedicel 2–5 mm, glabrous or pubescent. Calyx campanulate or funnelform, 2–3 mm; lobes ovate-triangular, veins green, margin white, membranous, ciliate, apex acute. Petals pink, obovate-oblong, ca. 2 × as long as calyx, apex truncate or retuse. Stamens longer than petals. Ovary obovoid. Styles exerted, long linear. Capsule ovoid, slightly longer than calyx. Seeds brown-gray, compressed subreniform, 1.2–1.5 mm, with striate protuberances; raphe mucronate tuberculate. Fl. Jun–Sep, fr. Aug–Oct.

Scrub, mountain slope grasslands, rocks, maritime sands; sea level to 2000 m. Anhui, Hebei, Henan, Hubei, Jiangsu, Liaoning, Shaanxi, Shandong, Shanxi [Korea].

The roots are used medicinally and the species is cultivated as an ornamental.

4. *Gypsophila tschiliensis* J. Krause in Pax, Repert. Spec. Nov. Regni Veg. Beih. 12: 364. 1922.

河北石头花 he bei shi tou hua

Gypsophila acutifolia Fischer ex Sprengel var. *chinensis* Regel; *G. ellipticifolia* Barkoudah.

Herbs perennial, (10–)20–30 cm tall. Roots thick. Stems erect or ascending, distally branched, slender, ca. 2 mm in diam. Leaves linear-lanceolate, 2–3 cm × 2–4 mm, midvein prominent, base attenuate, apex acute, mucronulate. Cymes laxly few flowered, glabrous; bracts white, lanceolate, scarious, veins brownish at apex. Pedicel brownish, 0.5–1.5 cm. Calyx brown-purple, campanulate, 3–5 × ca. 4 mm, 5-veined; lobes ovate, margin scarious, apex acuminate. Petals rose, obovate-cuneate, 6–7 × ca. 2 mm, apex truncate or slightly undulate. Stamens ca. 5 mm. Ovary ovoid, ca. 2 mm. Styles equaling stamens. Capsule ovoid. Seeds brown, globose, obtusely tuberculate. Fl. Jul–Aug, fr. Sep.

• Forest margins, scrub, mountain slopes, grasslands; 2000–3000 m. Hebei.

5. *Gypsophila huashanensis* Y. W. Tsui & D. Q. Lu in D. Q. Lu, Acta Phytotax. Sin. 31: 565. 1993.

华山石头花 hua shan shi tou hua

Herbs perennial, 20–50 cm tall. Roots woody, sometimes thick. Stems sparsely caespitose, erect, distally branched, glabrous. Leaves linear-lanceolate, 2–4 cm × 2–5 mm, midvein abaxially prominent, base attenuate, connate into a short sheath, apex acute. Corymbose cymes terminal or borne in distal leaf axils, in subcapitate clusters; bracts ovate, 1–3 mm, scarious, glabrous, apex acute. Pedicel slender, 2–3 mm. Calyx white membranous between 5 brown-purple veins, campanulate, 2–3 mm; lobes membranous at margin, apex obtuse. Petals pinkish white, oblong-oblancheolate, ca. 5 mm, apex retuse. Filaments exerted, linear, flat, unequal, shorter than to longer than petals, base broad. Ovary ovoid, ca. 1 mm. Styles longer than filaments. Capsule ovoid, slightly longer than calyx. Seeds brown, reniform-globose, both surfaces elevated striate; raphe acutely tuberculate. Fl. Jul–Aug, fr. Aug–Sep.

• Mountain slopes, valleys, roadside grasslands, rock crevices; 600–2600 m. S Shaanxi (Hua Shan, Qin Ling).

6. *Gypsophila davurica* Turczaninow ex Fenzl in Ledebour, Fl. Ross. 1: 294. 1842.

草原石头花 cao yuan shi tou hua

Herbs perennial, 50–80 cm tall, glabrous. Roots brownish to brown-gray, thick, ca. 1 cm in diam., woody. Stems several, caespitose, distally branched. Leaves sessile, linear-lanceolate, 3–6 cm × 1–7 mm, midvein abaxially prominent, base narrowed, apex long acuminate. Cymes lax; bracts lanceolate, margin slightly membranous, ciliate, apex acuminate to caudate. Pedicel 4–10 mm. Calyx campanulate, 3–4 mm, 5-lobed for 1/3–1/2 its length; lobes ovate-triangular, veins 5, extending to apex, green, margin white, broadly membranous, apex acute. Petals pinkish or pinkish white, obovate-oblong, ca. 3 × as long as calyx, base narrowed, apex retuse or truncate. Stamens shorter than petals. Ovary ovoid. Styles long exerted. Capsule ovoid, longer than calyx. Seeds brown-black, compressed reniform-globose, 1.2–1.5 mm, elevated striate; raphe acutely tuberculate. Fl. Jun–Sep, fr. Jul–Oct.

Hills, dry rocky slopes, steppes, fixed dunes. Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shanxi [E and N Mongolia, Russia (Far East, Siberia)].

1a. Leaves 3–7 mm wide 6a. var. *davurica*

1b. Leaves 1–2 mm wide 6b. var. *angustifolia*

6a. *Gypsophila davurica* var. *davurica*

草原石头花(原变种) cao yuan shi tou hua (yuan bian zhong)

Gypsophila patrinii Seringe subsp. *davurica*

(Turczaninow ex Fenzl) Kozhevnikov.

Leaves 3–7 mm wide.

Hills, dry rocky slopes, steppes, fixed dunes. Hebei, Heilongjiang, Jilin, Liaoning, Nei Mongol, Shanxi [E and N Mongolia, Russia (Far East, Siberia)].

The species is used medicinally.

6b. *Gypsophila davurica* var. *angustifolia* Fenzl in Ledebour, Fl. Ross. 1: 294. 1842.

狭叶石头花 xia ye shi tou hua

Leaves 1–2 mm wide.

Hilltops, dry rocky slopes, steppes. E Nei Mongol [Russia (Siberia)].

7. *Gypsophila pacifica* Komarov, Izv. Glavn. Bot. Sada RSFSR 16: 167. 1916.

大叶石头花 da ye shi tou hua

Herbs perennial, 60–90 cm tall. Roots brown-gray, thick, woody. Stems erect, reddish or glaucous, glabrous. Leaves ovate, 2.5–6 × 1–3.5 cm, 3- or 5-veined, base amplexicaul, apex obtuse to acute. Cymes terminal, lax; bracts triangular, margin membranous, ciliate, apex acuminate. Pedicel 5–10 mm. Calyx campanulate, 2–3 mm; lobes ovate-triangular, margin membranous, ciliate, apex obtuse. Petals pale purple or pink, oblong, ca. 6 mm, base narrowed, apex rounded. Stamens shorter than petals. Ovary ovoid. Styles shorter than petals. Capsule ovoid, longer than calyx. Seeds brown-black, compressed reniform-globose, 1.2–1.5 mm, obtusely tuberculate. Fl. Jul–Oct, fr. Aug–Oct.

Quercus-forested hills, forest margin grasslands, rocky slopes; 200–300 m. Heilongjiang, Jilin, Liaoning [Korea, Russia (Far East)].

The roots are used medicinally.

8. *Gypsophila patrinii* Seringe in de Candolle, Prodr. 1: 353. 1824.

紫萼石头花 zi e shi tou hua

Gypsophila acutifolia Fischer ex Sprengel var. *gmelinii* (Bunge) Regel; *G. gmelinii* Bunge.

Herbs perennial, 25–60 cm tall, glabrous. Roots thick, 5–10 mm in diam., woody. Stems ascending or erect. Leaves linear, 1.5–4 cm × 1–3 mm, base connate into a short sheath, apex acute; basal leaves fascicled; cauline leaves few. Cymes terminal, laxly few flowered; bracts lanceolate or triangular, 2–3 × ca. 1 mm, margin membranous, ciliate, apex acuminate. Pedicel slender, 0.5–2 cm. Calyx lilac membranous between green or purplish, broad veins, campanulate, 2–3 mm; lobes ovate, margin membranous, sparsely ciliate, apex acute. Petals purple-red, obovate, base cuneate, apex retuse. Stamens shorter than petals; filaments linear, flat; anthers yellow, subglobose. Ovary ovoid, ca. 1.5 mm. Styles ca. 3.5 mm. Capsule ovoid, longer than calyx. Seeds brown-red, compressed reniform-globose, 0.8–1.2 mm, both surfaces smooth; raphe tuberculate. Fl. Jun–Sep, fr. Jul–Oct.

Grassy mountain slopes, rocky slopes, Gobi Desert rock crevices, sands; 600–3400 m. Gansu, Ningxia, Qinghai, Xinjiang [Kazakhstan, N Mongolia, Russia (Siberia)].

9. *Gypsophila capituliflora* Ruprecht in Osten-Saken & Ruprecht, Sert. Tianschan. 40. 1869.

头状石头花 tou zhuang shi tou hua

Gypsophila dshungarica Czerniakowska.

Herbs perennial, to 25 cm tall. Roots thick, woody. Stems several, caespitose, usually simple, glabrous. Leaves linear, subtrigonal, 1–3 cm × ca. 1 mm, subfleshy, glabrous, apex acute; basal leaves caespitose. Cymes terminal, in subcapitate clusters 1–2 cm in diam.; bracts lanceolate, margin membranous, ciliate, apex acuminate. Pedicel ca. 1 mm. Calyx purple 5-veined, campanulate, 3.5–5 mm, lobed for 1/3–1/2 its length; lobes triangular, margin membranous, ciliate, apex acute. Petals light red-purple or white, narrowly obovate, 6–7 × ca. 1.5 mm, base cuneate, apex retuse. Stamens equaling petals. Ovary ca. 2 mm. Styles short. Capsule suboblong, subequaling calyx. Seeds purple-black, globose, 1.5–2 mm, minutely flat tuberculate. Fl. Jul–Sep, fr. Aug–Sep.

Dry mountain slopes; 800–2600 m. Gansu, Nei Mongol, Ningxia, Xinjiang [Kazakhstan, Kyrgyzstan, W Mongolia].

10. *Gypsophila licentiana* Handel-Mazzetti, Oesterr. Bot. Z. 82: 245. 1933.

细叶石头花 xi ye shi tou hua

Herbs perennial, 30–50 cm tall, glabrous. Stems caespitose, distally branched, straight, slender. Leaves linear, 1–3 cm × ca. 1 mm, subfleshy, base connate into a short sheath, apex usually acutely conduplicate carinate, cartilaginous. Cymes terminal, dense; bracts triangular, ca. 1.5 mm, margin white scarious, ciliolate, apex acuminate. Pedicel purplish, 2–3(–10) mm. Calyx white membranous between 5 green or deep purple veins, narrowly campanulate, 2–3 mm, lobed for ca. 1/3 its length; lobes ovate, apex acuminate. Petals white, triangular-cuneate, 2.5–3 × as long as calyx, apex retuse. Stamens unequal, shorter than petals; anthers yellowish brown, globose. Ovary ovoid. Styles equaling petals. Capsule slightly longer than calyx. Seeds reniform-globose, ca. 1 mm, tuberculate. Fl. Jul–Aug, fr. Aug–Sep.

• Mountain slopes, sands, field margins; 500–2000 m. Gansu, Nei Mongol, Ningxia, Qinghai, N Shaanxi, Shanxi, Xinjiang [?C Asia].

Chinese records of *Gypsophila acutifolia* Fischer ex Sprengel are referable to *G. licentiana*. True *G. acutifolia* is native to the Caucasus region and has distal stems and inflorescences glandular pubescent, leaves broader, and the calyx incised for ca. 1/2 its length. Czerepanov (Vasc. Pl. Russia Adjacent States, 167. 1995) recorded *G. licentiana* from C Asia, but without further data.

11. *Gypsophila spinosa* D. Q. Lu, Acta Phytotax. Sin. 31: 568. 1993.

刺序石头花 ci xu shi tou hua

Herbs perennial, 30–50 cm tall, glabrous. Roots thick. Stems erect. Leaves linear, 1–4.5 cm × ca. 1 mm, fleshy, base connate into a short sheath, apex acute. Corymbose cymes lax, bearing spines in forks of axis; spines 2–10 mm; bracts triangular, scarious. Flowers 3–4 mm in diam.; pedicel 1–5 mm. Calyx campanulate, 2–3 mm, 5-toothed; lobes triangular or ovate, margin scarious, apex obtuse. Petals light purple-red, pink, or

white, cuneate, ca. 4 × 1 mm, apex retuse. Stamens subequaling petals; anthers globose. Ovary ovoid. Styles long linear. Capsule ovoid. Seeds brown, ovoid, ca. 1 mm, striate tuberculate. Fl. and fr. Jul–Sep.

• Desert grasslands, river bank sands; 500–900 m. N Xinjiang (Altay Shan).

12. *Gypsophila paniculata* Linnaeus, Sp. Pl. 1: 407. 1753.

圆锥石头花 yuan zhui shi tou hua

Herbs perennial, 30–80 cm tall. Roots stout. Stems solitary, rarely sparingly caespitose, erect, diffusely many branched, glabrous or proximally glandular pubescent. Leaves lanceolate or linear-lanceolate, 2–5 cm × 2.5–7 mm, glabrous, midvein prominent, apex acuminate. Thyrses profusely forked, numerous flowered; bracts triangular, apex acute. Flowers small; pedicel slender, 2–6 mm, glabrous. Calyx prominently purple veined, broadly campanulate, 1.5–2 mm; lobes ovate, margin scarious, apex obtuse. Petals pale reddish or white, spatulate, ca. 3 × 1 mm, apex truncate or obtuse. Filaments linear, flat, subequaling petals; anthers globose. Ovary ovoid, ca. 1 mm. Styles slender. Capsule globose, slightly longer than calyx. Seeds brown-red, globose, ca. 1 mm, obtusely tuberculate. Fl. Jun–Aug, fr. Aug–Sep.

Grasslands, rocky slopes, fixed dunes, floodlands, fields; 1100–1500 m. N and W Xinjiang [Kazakhstan, W Mongolia, Russia (Siberia)].

The species is used medicinally and cultivated as an ornamental.

13. *Gypsophila perfoliata* Linnaeus, Sp. Pl. 1: 408. 1753.

钝叶石头花 dun ye shi tou hua

Gypsophila trichotoma Wenderoth.

Herbs perennial, yellow-green, to 70 cm tall. Stems erect, distally many branched, proximally glandular pubescent. Leaves obovate- or ovate-oblong, 3–7 × 1–3 cm, glandular pubescent, 3–5-veined, base amplexicaul and slightly connate. Thyrses diffuse; bracts triangular, glabrous, apex acuminate. Pedicel slender, 4–15 mm, glabrous. Calyx green veined, broadly campanulate, 2–4 mm, lobed for ca. 1/2 its length; lobes ovate, margin membranous, apex obtuse. Petals red, pink, or white, oblong, ca. 5 × 2 mm, apex retuse or obtuse. Stamens slightly shorter than petals. Ovary ovoid. Styles exerted. Capsule globose, longer than calyx. Seeds reniform, ca. 1 mm, minutely flat tuberculate. Fl. Jul–Aug, fr. Aug–Sep.

Forest grasslands, wet riversides, saline-alkaline soils, steppe sands; 500–1000 m. N Xinjiang (Altay Shan) [Kazakhstan, W Mongolia, Russia, Turkmenistan; SW Asia, SE Europe].

14. *Gypsophila cerastioides* D. Don, Prodr. Fl. Nepal. 213. 1825.

卷耳状石头花 juan er zhuang shi tou hua

Timaeosia cerastioides (D. Don) Klotzsch.

Herbs perennial, 10–27(–40) cm tall, tomentose. Roots conical, thick, 9–18 cm, fleshy. Stems densely caespitose, ascending. Leaves obovate-spatulate, 0.5–1.5 × 0.3–1.2 cm, both surfaces pubescent, margin ciliate; basal leaves long petiolate; cauline leaves sessile. Cymes terminal, 5–20-flowered; bracts leaflike, ovate, 2–5 mm, margin ciliate. Flowers 4–13 mm in diam.; pedicel 2–9 mm. Calyx green, broadly campanulate, 3–6 mm, lobed for ca. 1/2 its length; lobes ovate or lanceolate, margin ciliate, apex obtuse. Petals lilac or white, pale purple-red 3-veined, obovate-cuneate, 5–8 mm, base narrowed, apex retuse. Stamens shorter than petals. Ovary ovoid. Styles 2(or 3). Capsule ovoid, usually indehiscent. Seeds black, compressed globose, ca. 0.7 mm in diam., minutely tuberculate. Fl. and fr. May–Aug.

Mixed forests on mountain slopes, forest grasslands, water courses, rubble, roadside fields; 2800–4000 m. S Xizang [Bangladesh, Bhutan, N India, Nepal, N Pakistan, Sikkim].

Gypsophila sedifolia Kurz (Flora 55: 285. 1872), from Afghanistan, Kashmir, and Pakistan, is similar to *G. cerastioides*. It has not yet been recorded for China but might be expected to occur in SW Xinjiang and/or W Xizang.

15. *Gypsophila desertorum* (Bunge) Fenzl in Ledebour, Fl. Ross. 1: 292. 1842.

荒漠石头花 huang mo shi tou hua

Heterochroa desertorum Bunge, Verz. Altai Pfl. 29. 1836.

Herbs perennial, 5–15 cm tall, brown glandular pubescent. Roots brown, 0.5–1.5 cm in diam., woody. Stems densely caespitose, ascending, simple or distally sparsely branched, usually with dwarf, sterile, axillary shoots. Leaves pseudoverticillate, linear-subulate, 4–15 × 0.5–1 mm, rigid, midvein abaxially prominent, base connate, margin involute, apex apiculate. Inflorescence a dichasium; bracts lanceolate or ovate-lanceolate, 2–4 × 2–3 mm, apex apiculate. Pedicel 3–12 mm. Calyx campanulate, ca. 4 × 2–3 mm, lobed for ca. 1/2 its length; lobes ovate, ca. 1.5 mm, margin membranous, apex obtuse or acute. Petals white, lilac veined, obovate-cuneate, ca. 6 × 3 mm, base narrowed, apex retuse. Stamens slightly shorter than petals. Ovary ovoid, ca. 3 mm. Styles 2, ca. 2.5 mm. Capsule ovoid, ca. 4 mm. Seeds deep brown, reniform, ca. 1 mm, obtusely curved rugulose. Fl. May–Jul, fr. Aug.

Dry river valleys, sandy and desert steppes, gravelly places; 1400–1500 m. Nei Mongol, N Xinjiang [N Mongolia, Russia (Altai)].

16. *Gypsophila sericea* (Seringe) Krylov, Fl. Sibir. Occid. 5: 1087. 1931.

绢毛石头花 juan mao shi tou hua

Arenaria sericea Seringe in de Candolle, Prodr. 1: 414. 1824.

Herbs perennial, diffuse, small, sericeous, with stolons 10–35 cm, rooting at nodes. Stems numerous, ascending, branched, slender, 5–10 cm. Leaves sessile, lanceolate, ca. 1.5 cm × 1.5–3.5 mm, lower leaves obtuse at apex, upper leaves acute. Flowers solitary, terminal or borne in distal leaf axils; bracts leaflike. Pedicel 1.4–2 cm, hairlike. Calyx broadly campanulate,

4–5 × 3.5–4 mm, glandular pubescent, lobed for ca. 1/2 its length; lobes ovate, margin membranous, apex obtuse. Petals abaxially lilac, adaxially white, oblanceolate to obovate, 2.5–3 × as long as calyx. Stamens shorter than petals. Ovary ovoid, 4–5 mm. Styles incurved, long. Capsule equaling calyx. Seeds black, reniform, ca. 1.3 mm, flat tuberculate. Fl. Jun–Aug, fr. Jul–Aug.

Coniferous forests, forest margins, hill ridge grasslands; 1600–2400 m. N Xinjiang (Altay Shan) [Kazakhstan, N Mongolia, Russia (Siberia)].

17. *Gypsophila muralis* Linnaeus, Sp. Pl. 1: 408. 1753.

细小石头花 xi xiao shi tou hua

Psammophila muralis (Linnaeus) Fourreau;

Psammophiliella muralis (Linnaeus) Ikonnikov.

Herbs annual, 5–20 cm tall. Stems branched, proximally puberulous, distally glabrous. Leaves glaucous, linear, 0.5–2.5 cm × 1–2.5 mm, base attenuate, apex obtuse or acute. Dichasium lax; bracts leaflike. Pedicel strict, thin, many times longer than calyx. Calyx obconic-cylindric, 3–4 × 0.5–2.5 mm, lobed for 1/4–1/3 its length; lobes orbicular, apex erose. Petals pink, darker veined, obovate-cuneate, 1.5–2 × as long as calyx, apex erose. Stamens equaling or longer than calyx. Ovary ovoid. Styles short. Capsule suboblong, longer than calyx. Seeds numerous, black, asymmetrically ovoid, 0.3–0.5 mm, striate tuberculate. Fl. May–Oct.

Roadside grasslands, fields, walls. SE Heilongjiang (Xingkai Hu) [Kazakhstan, Russia (Siberia); SW Asia (Caucasus); Europe].

