

13. CERASTIUM Linnaeus, Sp. Pl. 1: 437. 1753.

卷耳属 juan er shu

Lu Dequan (鲁德全); John K. Morton

Herbs annual or perennial, pubescent and/or glandular pubescent, rarely glabrous. Stems usually caespitose, sometimes slightly woody at base. Leaves ovate, elliptic, or lanceolate. Inflorescence terminal, a dichasial cyme, dense or lax, sometimes flowers solitary. Sepals (4 or)5, free. Petals (4 or)5, sometimes absent, white, apex usually 2-lobed or retuse, rarely entire. Stamens (3 or 5 or)10; nectaries present. Ovary 1-loculed; ovules numerous. Styles 3–5, inserted opposite sepals. Capsule golden yellowish, cylindric, sometimes subequalling but usually exceeding calyx, hard, thin, brittle, dehiscing by $2 \times$ as many teeth as styles; teeth slightly curved, sometimes straight or revolute. Seeds numerous, globose or reniform, compressed, usually tuberculate; embryo annular.

About 100 species: almost cosmopolitan, most abundant in temperate and cold regions: 23 species (nine endemic) in China.

The identities of the taxa to which the following three names apply could not be ascertained. All were described from China, but none of the types has been seen by the present authors: *Cerastium calcicola* Ohwi (Repert. Spec. Nov. Regni Veg. 36: 46. 1934), described from Taiwan; *C. kaoi* Shimizu (J. Fac. Text. Sci. & Techn. Shinshu Univ. No. 36, Biol., No. 12 [Stud. Limest. Fl. Jap. & Taiwan, Pt. 2]: 23. 1963), also described from Taiwan; and *C. sinicum* Nakai (J. Jap. Bot. 15: 526. 1939), described from Hebei.

The record of *Cerastium perfoliatum* Linnaeus in FRPS (p. 83), from Zhejiang, requires confirmation. No specimens of this species have been seen by the current authors.

1a. Styles 3; capsule teeth 6.

2a. Leaves linear-lanceolate; petals obovate, longer than sepals; stamens 10 1. *C. cerastoides*

2b. Leaves ovate-elliptic; petals ovate, shorter than sepals; stamens 5 2. *C. parvipetalum*

1b. Styles (4 or)5; capsule teeth (8 or)10.

3a. Plants up to 20 cm tall.

4a. Leaves elliptic, oblong, ovate, or obovate-elliptic.

5a. Cyme densely clustered, headlike 3. *C. glomeratum*

5b. Cyme not as above.

6a. Stems ascending; pedicel 5–8 mm, usually nutant after anthesis 4. *C. pusillum*

6b. Stems erect; pedicel to 15 mm.

7a. Leaf apex obtuse; flowers sparse; sepals oblong, 4–5 mm 5. *C. limprichtii*

7b. Leaf apex acute; flowers dense; sepals oblong-lanceolate, 7–8 mm 6. *C. thomsonii*

4b. Leaves linear-lanceolate, lanceolate, or ovate-lanceolate.

8a. Leaves ovate-lanceolate.

9a. Plants annual; leaves 1–3 cm \times 2–5 mm; flowers borne in a lax dichasium; calyx strongly inflated in fruit; capsule conical-cylindric 7. *C. dichotomum*

9b. Plants perennial; leaves 1–2.5 cm \times 3–10 mm; flower solitary; calyx not inflated in fruit; capsule cylindric 8. *C. lithospermifolium*

8b. Leaves linear-lanceolate or lanceolate.

10a. Leaf apex obtuse; petals slightly shorter than or equaling sepals 9. *C. szechuense*

10b. Leaves apex acute; petals longer than sepals.

11a. Leaves 1.3–2 cm \times 2–4 mm; petals ca. 0.5 cm 10. *C. baischanense*

11b. Leaves 0.5–1 cm \times 1–2 mm; petals 1–1.3 cm 11. *C. morrisonense*

3b. Plants at least 15 cm tall.

12a. Leaves ovate, oblong, or elliptic.

13a. Plants stout, 40–100 cm tall; leaves 5–8 \times 1.5–4 cm.

14a. Leaves and bracts opposite 12. *C. davuricum*

14b. Leaves and bracts 3-verticillate 13. *C. verticifolium*

13b. Plants slender, 15–60 cm tall; leaves 1–4 \times 0.3–1.5 cm.

15a. Stems glabrescent; petals ca. $2 \times$ as long as sepals 14. *C. wilsonii*

15b. Stems pilose and/or glandular pubescent; petals slightly shorter than or equaling sepals 15. *C. fontanum*

12b. Leaves linear-lanceolate, lanceolate, ovate-lanceolate, or oblanceolate.

16a. Leave ovate-lanceolate or oblanceolate.

17a. Plants perennial; leaves ovate-lanceolate; sepals oblong-lanceolate, ca. 5 mm; petals oblong

or obovate, apex bifid 16. *C. furcatum*

- 17b. Plants annual; leaves oblanceolate; sepals ovate, 2–3 mm; petals spatulate, apex entire 17. *C. takasagomontanum*
- 16b. Leaves lanceolate or linear-lanceolate.
- 18a. Leaves lanceolate.
- 19a. Leaves 0.2–1 cm wide; sepals lanceolate; petal apex 2-lobed 18. *C. falcatum*
- 19b. Leaves 1–2 cm wide; sepals ovate-oblong; petal apex entire 19. *C. pauciflorum*
- 18b. Leaves linear-lanceolate.
- 20a. Leaves 1–2.5 cm; petals apically 2-lobed for 1/4–1/3 their length 20. *C. arvense*
- 20b. Leaves 3–8 cm; petals apically entire, retuse, or crenately 2-lobed.
- 21a. Petals spatulate, apex entire 21. *C. subpilosum*
- 21b. Petals obovate, apex retuse or crenately 2-lobed.
- 22a. Leaves 3–5 cm × 3–6 mm; sepals lanceolate; petals slightly longer than sepals; capsule ca. 2 × as long as sepals 22. *C. tianschanicum*
- 22b. Leaves 4–8 cm × 5–15 mm; sepals ovate; petals 2–3 × as long as sepals; capsule 2.5–3 × as long as sepals 23. *C. maximum*

1. *Cerastium cerastoides* (Linnaeus) Britton, Mem. Torrey Bot. Club 5: 150. 1894.

六齿卷耳 liu chi juan er

Stellaria cerastoides Linnaeus, Sp. Pl. 1: 422. 1753;
Cerastium cerastoides var. *foliosum* Kozhevnikov;
Dichodon cerastoides (Linnaeus) Reichenbach.

Herbs perennial, 10–20 cm tall. Stems caespitose, creeping basally, decumbent or ascending, branched distally, pubescent. Leaves linear-lanceolate, 8–20 × 1.5–2(–3) mm, apex acuminate. Cyme 3–7-flowered, rarely solitary; bracts leaflike, lanceolate. Pedicel 1.5–2 cm, glandular pubescent, recurved in fruit. Sepals broadly lanceolate, 4–6(–7) mm, 1-veined, margin membranous. Petals obovate, 8–12 mm, 2-lobed for ca. 1/4 their length. Stamens 10. Styles 3. Capsule cylindric, 10–12 mm, 6-toothed. Seeds reniform-globose, tuberculate. Fl. May–Aug, fr. Aug–Sep.

Mountain valleys near moist grasslands; 1000–2400 m (3300–5100 m in Xizang). Jilin, Liaoning, Qinghai, Xinjiang, Xizang [Afghanistan, India, ?Kashmir, Kazakhstan, Mongolia, ?Nepal, Pakistan, Russia (Siberia); N Africa, SW Asia, Europe, North America].

2. *Cerastium parvipetalum* Hosokawa, Trans. Nat. Hist. Soc. Taiwan 22: 227. 1932.

小瓣卷耳 xiao ban juan er

Herbs annual or biennial, 10–20 cm tall. Stems slender, pilose. Leaves subsessile, ovate-elliptic, ca. 3 × 1 cm, adaxially pubescent, base abruptly attenuate, apex acuminate. Cyme terminal, lax. Pedicel filiform, ca. 8 mm, viscous pilose. Sepals 5, ovate-lanceolate, ca. 3 mm, abaxially pilose, apex acuminate. Petals 5, ovate, ca. 2 mm; claw short; limb apex shortly 2-toothed, teeth acuminate at tip. Stamens 5. Ovary ovoid, ca. 1 mm. Styles 3, ca. 2 mm. Capsule cylindric-globose, ca. 2 mm, apex truncate, 6-toothed.

• Mountains; 1000–1500 m. S Taiwan.

3. *Cerastium glomeratum* Thuillier, Fl. Env. Paris, ed. 2, 226. 1799.

球序卷耳 qiu xu juan er

Herbs annual, 10–20 cm tall. Stems simple or caespitose, densely villous, distally glandular pubescent. Proximal leaves spatulate; distal leaves obovate-elliptic, 1.5–2.5 × 0.5–1 cm, base attenuate into a short petiole, both surfaces villous, midvein prominent, margin ciliate. Inflorescence of compact, cymose clusters (glomerules); rachis densely glandular pubescent; bracts leaflike, ovate-elliptic, densely pubescent. Pedicel 1–3 mm, densely pubescent. Sepals 5, lanceolate, ca. 4 mm, abaxially densely long glandular pubescent, margin narrowly membranous, apex acute. Petals 5, white, oblong, subequaling or slightly longer than sepals, base pilose, apex 2-lobed. Stamens shorter than sepals. Styles 5. Capsule cylindric, subequaling or 1.5–2 × as long as calyx, 10-toothed. Seeds brown, compressed triangular, tuberculate. Fl. Mar–Apr, fr. May–Jun.

Forest margins, mountain slope grasslands, sandy riversides; 100–3700 m. Fujian, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Shandong, Xizang, Yunnan, Zhejiang [cosmopolitan weed].

- 1a. Capsule 1.5–2 × as long as calyx 3a. var. *glomeratum*
1b. Capsule subequaling calyx . 3b. var. *brachycarpum*

3a. *Cerastium glomeratum* var. *glomeratum*

球序卷耳(原变种) qiu xu juan er (yuan bian zhong)

Cerastium vulgatum Linnaeus var. *glomeratum* (Thuillier) Edgeworth & J. D. Hooker.

Capsule 1.5–2 × as long as calyx.

Mountain slope grasslands; below 3700 m. Fujian, Guangxi, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shandong, Xizang, Yunnan, Zhejiang [cosmopolitan weed].

3b. *Cerastium glomeratum* var. *brachycarpum* L. H. Zhou & Q. Z. Han, Bull. Bot. Res., Harbin 15: 49. 1995.

短果卷耳 duan guo juan er

Capsule subequaling calyx.

- Forest margins, sandy riversides; ca. 100 m. Liaoning.

The status of this variety needs further study. In other parts of the range of *Cerastium glomeratum*, plants growing in very dry conditions often have short capsules.

4. *Cerastium pusillum* Seringe in de Candolle, Prodr. 1: 418. 1824.

山卷耳 shan juan er

Cerastium vulgatum Linnaeus var. *leiopetalum* Fenzl.

Herbs perennial, 5–15 cm tall. Roots slender, fibrous. Stems caespitose, ascending, densely pubescent. Proximal leaves spatulate, long pubescent; distal leaves oblong to ovate-elliptic, 5–15 × 3–7 mm, both surfaces white pubescent, midvein conspicuous, base cuneate, margin ciliate, apex obtuse. Cyme terminal; bracts leaflike. Pedicel 5–8 mm, densely glandular pubescent, after anthesis usually nutant. Sepals 5, lanceolate-oblong, 5–6 mm, abaxially densely pubescent, margin broadly membranous, sometimes purplish. Petals 5, white, oblong, 1.3–1.5 × as long as sepals, 2-lobed for ca. 1/4 their length. Styles 5. Capsule narrowly cylindrical, ca. 2 × as long as calyx, 10-toothed. Seeds brown, compressed globose, tuberculate. Fl. Jul–Aug, fr. Aug–Sep.

Mountain summit grasslands; 2800–3800 m. Gansu, SW Nei Mongol (Helan Shan), Ningxia, Qinghai, Xinjiang, Yunnan [Afghanistan, Kazakhstan, Mongolia, Russia].

5. *Cerastium limprichtii* Pax & K. Hoffmann in Pax, Repert. Spec. Nov. Regni Veg. Beih. 12: 365. 1922.

椭圆叶卷耳 tuo yuan ye juan er

Herbs perennial, 10–15(–20) cm tall. Stems simple, spreading whitish pilose, distally glandular. Leaves elliptic, 5–7 × 2–4 mm, margin remotely ciliate, apex obtuse. Dichasium few flowered; bracts leaflike. Flowers 8–10 mm in diam.; pedicel ca. 1.5 cm, glandular. Sepals oblong, 4–5 mm, pilose, margin white, apex obtuse. Petals obovate, ca. 7 mm, glabrous, apex 2-lobed. Stamens 10. Styles 5. Capsule ca. 2 × as long as calyx. Fl. and fr. Jul–Sep.

• Forests, mountain slope grasslands and summit rocks, roadsides; 3000–3500 m. W Hebei (Xiaowutai Shan), S Shaanxi (Taibai Shan).

6. *Cerastium thomsonii* J. D. Hooker, Fl. Brit. India 1: 228. 1874.

藏南卷耳 zang nan juan er

Herbs perennial, 5–15 cm tall. Stems caespitose, erect, slender, densely glandular pubescent. Leaves elliptic or oblong, 0.5–1.5 × 0.3–1 cm, both surfaces long pilose, midvein prominent, base attenuate into a short petiole on proximal leaves, broader and amplexicaul on distal leaves, apex subacute. Cyme subumbellate, few flowered; bracts with narrowly scarious margin. Flowers large; pedicel 3–15 mm, densely glandular pubescent. Sepals oblong-lanceolate, 7–8 × ca. 2 mm, abaxially laxly glandular pubescent, margin broadly membranous, apex subacute. Petals white, broadly

obovate, 8–9 mm, apex 2-lobed. Stamens shorter than sepals. Ovary ovoid. Styles 5. Capsule cylindrical, ca. 1 cm. Seeds brown, reniform, ca. 1 mm, tuberculate.

Forests, scrub, mountain slope grasslands, mire meadows; 2500–3500 m. Xizang [Afghanistan, NW India, ?Kashmir, Nepal, Pakistan].

7. *Cerastium dichotomum* Linnaeus subsp. *inflatum* (Link) Cullen in Hedge & al., Notes Roy. Bot. Gard. Edinburgh 27: 211. 1967.

膨萼卷耳 peng e juan er

Cerastium inflatum Link in Desfontaines, Tabl. Ecole Bot., ed. 3, 462. 1829.

Herbs annual, 10–15 cm tall. Stems simple or few branched, erect, pubescent, mixed with glandular hairs distally. Leaves ovate-lanceolate, 1–3 cm × 2–5 mm, pilose, base amplexicaul, margin ciliate, apex acuminate. Dichasium terminal, somewhat lax; bracts leaflike, ovate-lanceolate, pilose. Calyx ovate, 1–1.2 cm × ca. 3.5 mm, strongly inflated in fruit, abaxially glandular pubescent, margin membranous. Petals oblong-obovate, ca. 1.5 × as long as calyx, apex retuse. Stamens 10. Styles 5. Capsule erect, conical-cylindrical, ca. 1.5 × as long as calyx, teeth flat. Fl. May–Jul.

Coniferous forests, hilly meadows; ca. 1500 m. Xinjiang [Kazakhstan; SW Asia].

Some authors treat this taxon at specific rank, as *Cerastium inflatum*. It differs from typical *C. dichotomum* (from N Africa, C and SW Asia, and S Europe) in having the dichasium somewhat lax and the calyx strongly inflated in fruit.

8. *Cerastium lithospermifolium* Fischer, Mém. Soc. Imp. Naturalistes Moscou 3: 81. 1812.

紫草叶卷耳 zi cao ye juan er

Herbs perennial, 5–15 cm tall, glandular pubescent. Stems sparsely caespitose. Leaves ovate-lanceolate, 1–2.5 × 0.3–1 cm, both surfaces white pilose, apex acute. Flower solitary, terminal; pedicel erect, 1–3 cm. Sepals 5, oblong-elliptic or ovate-lanceolate, 7–8 × ca. 3 mm, apex acuminate. Petals white, broadly obovate, 14–16 mm, apex retuse. Styles 5. Capsule cylindrical, ca. 2 × as long as calyx, 10-toothed, teeth revolute. Seeds light brown, compressed globose, tuberculate. Fl. Jul–Aug, fr. Aug–Oct.

Mountain slope grasslands; 300–3600 m. Xinjiang [Kazakhstan, Mongolia, Russia].

9. *Cerastium szechuense* F. N. Williams, J. Linn. Soc., Bot. 34: 433. 1899.

四川卷耳 si chuan juan er

Herbs annual, 17–20 cm tall, glandular pubescent. Stems simple or basally branched. Leaves sessile, lanceolate, apex obtuse. Cyme terminal, many flowered, inflexed after anthesis; bracts leaflike. Sepals oblong-lanceolate, margin membranous, apex acute. Petals white, narrowly elliptic-cuneate, slightly shorter than or equaling sepals, apex 2-lobed. Stamens 10. Capsule narrowly cylindrical, 10-toothed, ca. 2 × as long as calyx. Seeds few.

• Mountain slope grasslands; 2100–3500 m. N and W Sichuan.

10. *Cerastium baischanense* Y. C. Chu, Fl. Pl. Herb. Chin. Bor.-Orient. 3: 227. 1975.

长白卷耳 *chang bai juan er*

Herbs perennial, 6–20 cm tall, densely pubescent. Stems caespitose, ascending, slender. Proximal leaves oblanceolate, small, pilose, base attenuate into a short petiole, apex acute; middle and distal leaves lanceolate or linear-lanceolate, larger, 1.3–2 cm × 2–4 mm, midvein conspicuous, base cuneate, apex acute; leaf axils with dwarf, sterile shoots. Cyme terminal, 3–5-flowered; bracts leaflike, broadly lanceolate, pilose, apex acute. Pedicel 4–15 mm, densely spreading hairy. Sepals oblong-lanceolate or suboblong, 4–5 mm, abaxially pilose, margin membranous, apex obtuse. Petals white, oblong-obovate, 5–5.5 × 2–2.5 mm, slightly longer than sepals, 2-lobed for 1/5–1/4 their length. Stamens 10, shorter than petals. Styles 5. Capsule cylindrical, 8–10 mm, 10-toothed, teeth erect. Seeds broadly ovoid, slightly compressed, tuberculate. Fl. Jun–Aug, fr. Jul–Aug.

• Alpine tundra, moist stony slopes, near hot springs; ca. 1700 m. S Jilin (Changbai Shan).

11. *Cerastium morrisonense* Hayata, J. Coll. Sci. Imp. Univ. Tokyo 25: 57. 1908.

玉山卷耳 *yu shan juan er*

Cerastium formosanum (Ohwi) Ohwi; *C. morrisonense* var. *formosanum* Ohwi; *C. trigynum* Villars var. *morrisonense* (Hayata) Hayata; *C. trigynum* var. *taiwanianum* S. S. Ying.

Herbs perennial or biennial, glandular pubescent when young. Leaves linear-lanceolate, 5–10 × 1–2 mm, base attenuate, semiamplexicaul, apex acute, aristate. Cyme ca. 3-flowered or flower solitary; bracts scalelike. Pedicel 1–1.5 cm, glandular pubescent. Sepals lanceolate, 6–7 mm, abaxially glandular pubescent, adaxially glabrous, margin membranous. Petals white, obovate, 1–1.3 cm, apex 2-lobed. Stamens 10, inserted opposite sepals; filaments 5–6 mm, 2-glandular at base. Ovary ovoid, ca. 2 mm, 1-loculed; ovules numerous. Styles 5, inserted opposite sepals, ca. 3 mm. Capsule erect, cylindrical, ca. 7 × 1–2 mm, 10-toothed. Seeds reniform-globose, compressed, ca. 1 mm, tuberculate.

• Forests, slopes, rocks; 2500–4000 m. Taiwan.

12. *Cerastium davuricum* Fischer ex Sprengel, Pl. Min. Cogn. Pug. 2: 65. 1815.

达乌里卷耳 *da wu li juan er*

Cerastium amplexicaule Sims.

Herbs perennial, 50–100 cm tall, subglabrous or proximally villous. Stems stout, longitudinally striate. Leaves sessile, oblong to elliptic or ovate, 5–8 × 1.5–3 cm, base amplexicaul, apex subobtuse or acute. Cyme large, spreading; bracts leaflike, ovate. Flowers ca. 3 cm in diam.; pedicel 1–2.5(–6) cm. Sepals 5, glossy, elliptic-oblong or ovate-lanceolate, 0.8–1.2 cm × 3.5–5 mm, margin membranous, apex acute. Petals white, obovate, 1.5–2 × as long as sepals; claw bearded; limb apex 2-lobed. Stamens equaling sepals. Styles 5. Capsule cylindrical, straight, 1.5–2 × as long as calyx.

Seeds dark brown, oblate, ca. 1.5 mm, acutely tuberculate. Fl. Jun–Jul, fr. Aug–Sep.

Coniferous forests, hill scrub, meadows; (1000–)1900–2400 (–2800) m. N Xinjiang [Kazakhstan, Mongolia, Pakistan, Russia; SW Asia].

The specific epithet was spelled “*dahuricum*” in FRPS; however, the protologue used the spelling “*davuricum*.”

The flowers are large and ornamental.

13. *Cerastium verticifolium* R. L. Dang & X. M. Pi, Bull. Bot. Res., Harbin 15: 431. 1995.

轮叶卷耳 *lun ye juan er*

Herbs perennial, 40–100 cm tall, glabrous or sparsely villous. Stems stout, longitudinally striate. Leaves 3-verticillate, sessile, oblong or elliptic, 6–8 × 1.5–4 cm, base cuneate or amplexicaul, apex obtuse. Cyme terminal; bracts 3-verticillate, leaflike, elliptic-lanceolate. Flowers large; pedicel 1–4 cm. Sepals glossy, oblong-lanceolate, 0.9–1.1 cm × 4–5 mm, margin membranous, apex acute. Petals white, obcordate, 2-lobed for ca. 1/3 their length. Stamens 10, equaling sepals. Styles 5. Capsule not seen.

• Mountain valleys; 1800–2000 m. Xinjiang.

14. *Cerastium wilsonii* Takeda, Bull. Misc. Inform. Kew 1910: 381. 1910.

卵叶卷耳 *luan ye juan er*

Herbs perennial, 25–35 cm tall. Roots slender. Stems ascending, glabrescent. Basal leaves spatulate, base attenuate into a long petiole; cauline leaves sessile, ovate or ovate-elliptic, 1.5–2.5 cm × 8–12 mm, midvein and base villous, apex acute. Cyme terminal, many flowered; bracts leaflike, small, pilose. Pedicel slender, to 3 cm, glandular pubescent. Sepals lanceolate or broadly so, ca. 6 mm, abaxially pilose, margin membranous, apex acute. Petals narrowly obovate, ca. 2 × as long as sepals, 2-lobed for ca. 1/2 their length, lobes lanceolate, apex acuminate. Stamens slightly longer than sepals. Styles 5, linear. Capsule cylindrical, slightly longer than calyx, 10-toothed. Seeds numerous, brown, subtriangular-globose, slightly compressed, ca. 1 mm, tuberculate. Fl. Apr–May, fr. Jun–Jul.

• Forest margins, mountain slopes; 1100–2000 m. Anhui, Gansu, Henan, Hubei, S Shaanxi, Sichuan, Yunnan.

15. *Cerastium fontanum* Baumgarten, Enum. Stirp. Transsilv. 1: 425. 1816.

喜泉卷耳 *xi quan juan er*

Herbs short-lived perennial or annual, 15–40 cm tall. Stems caespitose or simple, suberect; sterile stems decumbent; flowering stems pilose and/or glandular pubescent all round. Basal leaves ovate, obovate-lanceolate, ovate-spatulate, or spatulate, 5–13 × 3–10 mm, both surfaces pilose, base attenuate into a petiole; cauline leaves subsessile, ovate, oblong, or narrowly ovate-oblong, 1–3(–4) × 0.3–1(–1.2) cm, both surfaces pilose or pubescent, margin densely ciliate, apex acute. Cyme terminal, spreading, lax, up to 40-flowered; bracts leaflike, ovate, 3–5 mm, both surfaces glandular

pubescent. Pedicel slender, 0.5–2.5 cm, densely glandular pubescent, recurved after anthesis. Sepals oblong- or ovate-lanceolate, 5–6 mm, abaxially densely glandular pubescent, margin membranous or narrowly so. Petals obovate or obovate-oblong, shorter than to 2 × as long as sepals, apex 2-lobed. Stamens shorter than petals. Ovary ovoid, ca. 2 mm. Styles 5, linear, slightly longer than ovary. Capsule cylindric, 8–10 mm, ca. 2 × as long as calyx, 10-toothed, teeth usually recurved. Seeds brown, usually 0.4–0.8 mm in diam., tuberculate. Fl. Apr–Jun, fr. May–Jul.

Forests, forest margins, mountain slopes, hilltop grasslands, fields, sandy soils, rock crevices, roadsides; 100–4300 m. Anhui, Fujian, Gansu, Guangdong, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [cosmopolitan weed].

1a. Herbs short-lived perennial; petals shorter than or equaling sepals 15a. subsp. *vulgare*

1a. Herbs annual; petals 7–9 mm, 1.5–2 × as long as sepals 15b. subsp. *grandiflorum*

15a. *Cerastium fontanum* subsp. *vulgare* (Hartman) Greuter & Burdet in Greuter & Raus, Willdenowia 12: 37. 1982.

簇生泉卷耳 *cu sheng quan juan er*

Cerastium vulgare Hartman, Handb. Skand. Fl. 182.

1820; *C. caespitosum* Gilibert ex Ascherson, nom. illeg.

(included *C. viscosum* Linnaeus and *C. vulgatum* Linnaeus); *C. caespitosum* subsp. *triviale* (Spenner) Hiitonen; *C. fontanum* var. *angustifolium* (Franchet) H. Hara; *C. fontanum* subsp. *holosteoides* (Fries) Salman et al.; *C. fontanum* var. *tibeticum* (Edgeworth & J. D. Hooker) C. Y. Wu & L. H. Zhou; *C. fontanum* subsp. *triviale* (Spenner) Jalas; *C. holosteoides* Fries; *C. holosteoides* var. *hallaisanense* (Nakai) Mizushima; *C. holosteoides* subsp. *triviale* (Spenner) Möschl; *C. ianthes* F. N. Williams; *C. triviale* Link, nom. illeg. (included *C. viscosum* and *C. vulgatum*); *C. vulgatum* Linnaeus var. *angustifolium* Franchet; *C. vulgatum* subsp. *caespitosum* Dostál; *C. vulgatum* var. *hallaisanense* Nakai; *C. vulgatum* var. *tibeticum* Edgeworth & J. D. Hooker.

Herbs short-lived perennial. Petals shorter than or equaling sepals.

Forest margins, mountain slopes, hilltop grasslands, fields, sandy soils, rock crevices, roadsides; 100–2300 m. Anhui, Fujian, Gansu, Guangdong, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [cosmopolitan weed].

15b. *Cerastium fontanum* subsp. *grandiflorum* H. Hara, J. Jap. Bot. 52: 353. 1977.

大花泉卷耳 *da hua quan juan er*

Cerastium grandiflorum Hamilton ex D. Don, Prodr. Fl. Nepal. 216. 1825, not Gilibert (1782), nor Waldstein & Kitaibel (1803–1805); *C. holosteoides* subsp. *triviale* var. *grandiflorum* Majumdar; *C. nipaulense* Wallich ex G. Don, nom. illeg. (included *C. grandiflorum*

Hamilton ex D. Don); *C. triviale* var. *nipaulense* F. N. Williams, nom. illeg.; *C. vulgatum* var. *grandiflorum* Edgeworth & J. D. Hooker.

Herbs annual. Petals 7–9 mm, 1.5–2 × as long as sepals. Forested mountain slopes; 3100–4300 m. Xizang [Nepal].

The placement of this variety under *Cerastium fontanum* requires further study.

16. *Cerastium furcatum* Chamisso & Schlechtendal, Linnaea 1: 61. 1826.

缘毛卷耳 *yuan mao juan er*

Cerastium amurense Ohwi; *C. ciliatum* Ohwi; *C. ciliatum* var. *acutifolium* (Franchet) Handel-Mazzetti; *C. ciliatum* var. *brevifolium* (Franchet) Handel-Mazzetti; *C. rigidum* Ledebour (1815), not (Scopoli) Vitman (1789); *C. rubescens* Mattfeld; *C. vulgatum* Linnaeus var. *acutifolium* Franchet; *C. vulgatum* var. *brevifolium* Franchet.

Herbs perennial, 15–55 cm tall. Stems caespitose or simple, suberect, villous, distally both villous and glandular pubescent. Basal leaves spatulate; cauline leaves ovate-lanceolate, 1–3 × 0.4–1.1 cm, base rounded or cuneate, apex obtuse or acute. Cyme spreading; bracts leaflike. Pedicel slender, 1–3.5 cm, densely pubescent and glandular pubescent, recurved in fruit. Sepals oblong-lanceolate, ca. 5 mm, pubescent, margin broadly membranous. Petals oblong or obovate, 1.5–2 × as long as sepals, base ciliate, apex 2-lobed. Stamens sparsely villous. Styles 5. Capsule cylindric, ca. 2 × as long as calyx. Seeds brown, compressed globose, tuberculate. Fl. May–Aug, fr. Jul–Sep.

Forest margins, mountain valleys, hillsides and summits, meadows; 1200–3800 m. Gansu, Henan, S Jilin (Changbai Shan), Ningxia, Shaanxi, Shanxi, Sichuan, Xizang, Yunnan [N Korea, E Russia].

17. *Cerastium takasagomontanum* Masamune, Trans. Nat. Hist. Soc. Taiwan 28: 120. 1938.

高山卷耳 *gao shan juan er*

Arenaria takasagomontana (Masamune) S. S. Ying;

Cerastium subpilosum Hayata var. *takasagomontanum* (Masamune) S. S. Ying.

Herbs annual, usually densely glandular pubescent. Stems erect. Leaves oblanceolate, 1–3.5 cm × 3–8 mm, base attenuate, semiamplexicaul, apex acute. Cyme terminal; bracts ovate, margin ciliate. Pedicel 1–2 cm. Sepals ovate, 2–3 × 1–1.5 mm, apex obtuse. Petals spatulate, ca. 2 × as long as sepals, apex entire. Stamens 1.5–2 mm. Ovary ovoid, ca. 1 mm. Styles 1–1.5 mm. Capsule erect, cylindric-ovoid, 2.5–3 mm, acutely 8–10-toothed.

• Mountain slopes and rocks; 2500–3400 m. C Taiwan.

18. *Cerastium falcatum* Bunge ex Fenzl in Ledebour, Fl. Ross. 1: 398. 1842.

披针叶卷耳 *pi zhen ye juan er*

Cerastium maximum Linnaeus var. *falcatum* Grenier.

Herbs perennial, 15–40 cm tall, sparsely glandular pubescent. Stems ascending or erect. Leaves sessile, lanceolate, 2–6 × 0.2–1 cm, both surfaces and margin pilose, midvein conspicuous, base cuneate, apex acute. Cyme terminal; bracts ovate-lanceolate. Pedicel slender,

2.5–3 cm, glandular pubescent, usually pendent in fruit. Sepals lanceolate, 3–5 mm, glandular pubescent, margin membranous, apex sharply pointed. Petals obovate-oblong, 1.5–2 × as long as sepals, apex 2-lobed. Stamens shorter than petals. Styles 5. Capsule oblong-ovoid, 10-toothed. Seeds brown, reniform-globose, obtusely tuberculate. Fl. May–Aug, fr. Jul–Sep.

Scrub forests, grassy forest margins, mountain slopes, ravines, edges of farmland; 800–2800 m. Gansu, Hebei, Nei Mongol, Shanxi, Xinjiang [Afghanistan, Kazakhstan, Pakistan, Russia].

19. *Cerastium pauciflorum* Steven ex Seringe in de Candolle, Prodr. 1: 414. 1824.

疏花卷耳 shu hua juan er

Herbs perennial, 20–60 cm tall. Roots slender. Stems caespitose, erect or ascending, pubescent, distally glandular hairy. Basal leaves spatulate, small; cauline leaves sessile, lanceolate, 3–8 × 1–2 cm, both surfaces hairy, base attenuate, margin ciliate, apex acute or acuminate. Cyme terminal; bracts leaflike, ovate-lanceolate. Flowers 1.5–1.8 cm in diam.; pedicel slender, 0.5–3 cm, densely glandular pubescent. Sepals ovate-oblong, ca. 6 × 2 mm, abaxially glandular pubescent, margin membranous. Petals obovate or obovate-oblong, 1–1.3 cm, 1.5–3 × as long as calyx, glabrous or pilose at base, apex entire. Stamens glabrous or filaments pilose at base. Styles 5. Capsule cylindrical, ca. 2 × as long as calyx, 10-toothed, teeth revolute. Seeds yellow-brown, triangular-reniform, tuberculate. Fl. May–Jun, fr. Jul–Aug.

Forests, hillside scrub forests, meadows, wet river banks, wet mountain roadsides; 200–2500 m. Gansu, Heilongjiang, Jilin, Liaoning, Xinjiang [Japan, Kazakhstan, Korea, Mongolia, Russia].

1a. Leaves 3–6 cm; petals 1.5–2 × as long as calyx;

petals and filaments glabrous 19a. var. *pauciflorum*

1a. Leaves 4–8 cm; petals 2.5–3 × as long as calyx;

petals and filaments pilose at base 19b. var. *oxalidiflorum*

19a. *Cerastium pauciflorum* var. *pauciflorum*

疏花卷耳(原变种) shu hua juan er (yuan bian zhong)

Cerastium ledebourianum Seringe; *C. pilosum* Ledebour (1815), not Smith (1809).

Leaves 3–6 cm. Petals 1.5–2 × as long as calyx. Petals and filaments glabrous. Fl. May–Jun, fr. Jul–Aug.

Hillside scrub forests, wet river banks; 1000–2500 m. Gansu, Xinjiang [Japan, Kazakhstan, Korea, Mongolia, Russia].

19b. *Cerastium pauciflorum* var. *oxalidiflorum* (Makino) Ohwi, Acta Phytotax. Geobot. 11: 254. 1942.

毛蕊卷耳 mao rui juan er

Cerastium oxalidiflorum Makino, Bot. Mag. (Tokyo) 19: 102. 1905; *C. pauciflorum* var. *amurense* (Regel) Mizushima; *C. pilosum* var. *amurense* Regel.

Leaves 4–8 cm. Petals 2.5–3 × as long as calyx. Petals and filaments pilose at base. Fl. May–Jul, fr. Jul–Aug.

Forests, meadows, wet mountain roadsides; 200–800 m. Heilongjiang, Jilin, Liaoning [Japan, Korea, Russia (Far East)].

20. *Cerastium arvense* Linnaeus subsp. *strictum* Gaudin, Fl. Helv. 3: 245. 1828.

卷耳 juan er

Cerastium arvense var. *angustifolium* Fenzl; *C. arvense* var. *strictum* W. D. J. Koch; *C. strictum* Haenke (1789), not Linnaeus (1753).

Herbs perennial, 15–35 cm tall. Stems sparsely caespitose, creeping proximally, erect distally, retrorsely purplish red hairy, distally both retrorsely hairy and glandular pubescent, or glabrous throughout. Leaves linear to narrowly lanceolate, 0.5–2.5 cm × 1–4 mm, pilose or glabrous, base cuneate, amplexicaul, margin sometimes ciliate, apex acute or acuminate; leaf axils with dwarf, sterile shoots. Cyme terminal, 3–7-flowered; bracts leaflike, lanceolate, pilose, margin scarious. Pedicel 1–1.5 cm, densely white glandular pubescent. Sepals lanceolate, ca. 6 × 1.5–2 mm, abaxially densely villous, margin membranous. Petals obovate, ca. 2 × as long as sepals, 2-lobed for 1/4–1/3 their length. Stamens shorter than petals. Styles 5. Capsule cylindrical, ca. 1.3 × as long as calyx, 10-toothed. Seeds numerous, brown, reniform, slightly compressed, tuberculate. Fl. May–Aug, fr. Jul–Sep. $2n = 36$.

Sand dunes under forests of *Pinus sylvestris* var. *mongolica*, forest margins, sand dune scrub, hillsides, grassy mountain valleys and hilltops, steppes, ditches; 600–4300 m. Gansu, Hebei, Henan, Jiangxi, Jilin, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shanxi, Sichuan, Xinjiang, Yunnan [Japan, Kazakhstan, Korea, Mongolia, Russia; Europe, North and South America].

In FRPS, *Cerastium arvense* var. *arvense* was recorded from China, as well as var. *angustifolium* (a synonym of the widespread subsp. *strictum*) and var. *glabellum*. The identity of Chinese material as subsp. *arvense* needs confirmation: this taxon is native to W Europe and has been introduced into several other temperate regions, where it grows as a weed in grassy places. Its chromosome number is tetraploid ($2n = 72$), as compared with diploid ($2n = 36$) in subsp. *strictum*. These two subspecies are very difficult to separate morphologically, especially in the herbarium, but a chromosome count can provide a strong indication of identity. *Cerastium arvense* var. *glabellum* (Turczaninow) Fenzl (in Ledebour, Fl. Ross. 1: 413. 1842, based on *C. glabellum* Turczaninow, Bull. Soc. Imp. Naturalistes Moscou 15: 614. 1842) is probably only a glabrous form of subsp. *strictum*.

21. *Cerastium subpilosum* Hayata, Icon. Pl. Formos. 3: 39. 1913.

毛卷耳 mao juan er

Arenaria subpilosa (Hayata) Ohwi; *Cerastium taiwanense* T. S. Liu.

Herbs perennial. 15–40 cm tall. Stems slender, somewhat prostrate, pilose. Leaves sessile, linear-lanceolate, 3–4.5 cm × 3–4 mm, adaxially aristate pilose, abaxially subglabrous, base attenuate, margin remotely ciliate, apex acute. Cyme terminal, lax. Pedicel slender, 1–3 cm, pubescent. Sepals ovate-oblong, 2–4 × 1–1.5 mm, margin ciliate, apex obtuse.

Petals spatulate, ca. 2 × as long as sepals, base attenuate, apex rounded, entire. Ovary 1–1.5 mm. Styles 4 or 5. Capsule cylindric, 3–4 × 2–2.5 mm, 8–10-toothed. Seeds brown-red, oblong-globose, slightly compressed, ca. 1 mm, tuberculate.

• Mountains; 3000–3900 m. C Taiwan.

22. *Cerastium tianschanicum* Schischkin, Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyssh. Rast. 2: 136. 1936.
天山卷耳 tian shan juan er

Cerastium vulgatum Linnaeus var. *tianschanicum* (Schischkin) Kozhevnikov.

Herbs perennial, 15–35 cm tall, densely pubescent. Stems ascending, distally branched. Leaves sessile, linear-lanceolate, 3–5 cm × 3–6 mm, base semiamplexicaul. Cyme lax; bracts ovate-triangular, small, margin ciliate. Pedicel equaling or 2–3 × as long as sepals. Sepals lanceolate, 6–7.5 × 2–3 mm, abaxially glandular pubescent, margin membranous. Petals oblong-obovate, ca. 9 × 5 mm, ca. 1.5 × as long as sepals, apex retuse. Stamens shorter than petals; anthers yellow, ovoid. Styles 5. Capsule erect, oblong, ca. 2 × as long as calyx, 10-toothed. Seeds deep brown, reniform or globose, ca. 1 mm, finely and obtusely tuberculate. Fl. May–Jun, fr. Jun–Jul.

Coniferous forests, subalpine meadows, river banks, gullies; 700–2700 m. Xinjiang [Afghanistan, Kazakhstan].

23. *Cerastium maximum* Linnaeus, Sp. Pl. 1: 439. 1753.
大卷耳 da juan er

Herbs perennial, 20–40 cm tall, tomentellous, distally glandular pubescent. Stems simple, erect. Leaves linear-lanceolate to lanceolate, 4–8 × 0.5–1.5 cm, apex acuminate. Cyme terminal; bracts leaflike. Pedicel glandular hairy. Sepals oblong-ovate or ovate, 6–10 × 3–4 mm, glandular pubescent, margin membranous, apex obtuse. Petals obcordate, 2–3 × as long as sepals, apex crenately 2-lobed. Styles 5. Capsule conical, straight, 1.5–2 × as long as calyx, teeth revolute. Seeds brown, ca. 2 mm, obtusely tuberculate. Fl. Jun–Jul, fr. Aug–Sep.

Scrub, grassy river banks. Xinjiang [Russia; North America].

