

39. ROCHELIA Reichenbach, Flora 7: 243. 1824.

李果鹤虱属 *luan guo he shi shu*

Herbs annual. Stems branched or simple, slender, hispid. Leaves alternate, 1-veined. Cymes scorpioid; bracts ± opposite flowers. Flowers pedicellate. Calyx 5-parted to base; lobes linear to lanceolate, somewhat enlarged in fruit, apex usually incurved, rarely straight. Corolla funnellform, light blue; tube straight or slightly curved; throat appendaged; limb 5-parted. Stamens inserted at lower part of corolla tube, included; filaments short; anthers oblong, apex with somewhat prominent connectives. Ovary divided; ovules 2. Style entire; stigma capitate. Gynobase subulate. Nutlets 2, each containing 1 seed, tuberculate, with glochids or glabrous; attachment scar near base.

About 15 species: C and SW Asia, Australia, Europe; five species in China.

- 1a. Calyx lobes triangular, cordate basally 5. *R. cardiosepala*
- 1b. Calyx lobes not triangular, not cordate basally.
 - 2a. Calyx united above base 4. *R. peduncularis*
 - 2b. Calyx completely divided.
 - 3a. Calyx lobes straight, with protruding midvein 3. *R. rectipes*
 - 3b. Calyx lobes arciform, curved around nutlets, midvein not protruding.
 - 4a. Nutlets glabrous, lustrous 2. *R. leiocarpa*
 - 4b. Nutlets tuberculate, densely stellate 1. *R. bungei*

1. *Rochelia bungei* Trautvetter, Trudy Imp. S.-Peterburgsk. Bot. Sada 9: 462. 1886.

李果鹤虱 *luan guo he shi*

Lithospermum retortum Pallas; *Rochelia disperma* Hochreutiner; *R. retorta* (Pallas) Lipsky; *R. stellulata* Reichenbach.

Plants 10–15 cm tall, gray-white hispid, hairs spreading or somewhat spreading, becoming mostly hooklike at apex on pedicel and calyx. Stems erect, usually branched from base; branches slender, ascending. Basal leaves short petiolate, oblanceolate to obovate, 1–2 cm; stem leaves sessile, lanceolate to linear, 1–2 cm, abaxially with veins protruding, apex ± obtuse. Inflorescences 5–10 cm in fruit; bracts oblanceolate to obovate, smaller than leaves. Pedicel 5–7 mm, spreading or slightly recurved. Flowers widely spaced. Calyx lobes linear, becoming semiterete, incurved, ca. 2 mm, to 4–5 mm in fruit, persistent. Corolla light blue-purple; tube almost as long as calyx; throat appendages low trapeziform; lobes of limb unequal, obovate. Anthers ca. 0.3 mm. Style persistent on apex of gynobase in fruit, surpassing nutlets, ca. 0.6 mm. Nutlets obliquely narrowly ovoid, 2–3 mm, tubercles stellate pubescent at apex. Fl. Apr-May.

Saline and alkaline areas; ca. 2700 m. N Xinjiang [Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Russia, Tajikistan, Turkmenistan, Uzbekistan; SW Asia].

2. *Rochelia leiocarpa* Ledebour, Fl. Altaic. 1: 172. 1829.

光果李果鹤虱 *guang guo luan guo he shi*

Herbs strigose. Stems usually single, erect, branched above, 3–6 cm tall. Basal leaves narrowly obovate to obovate, 3–7 mm; stem leaves linear, 5–10 mm. Pedicel 2–3 mm in fruit. Calyx lobes linear, ca. 2 mm, arcuate inward in fruit, crisped pubescent. Corolla light blue; tube shorter than limb; lobes suborbicular. Nutlets oblique ovoid, 2–2.5 mm, glabrous or sparsely pubescent when young, yellowish white,

shiny. Fl. and fr. Apr-May.

N Xinjiang [N India, Kashmir, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan].

3. *Rochelia rectipes* Stocks, Hooker's J. Bot. Kew Gard. Misc. 4: 176. 1852.

直柄李果鹤虱 *zhi bing luan guo he shi*

Rochelia macrocalyx Bunge.

Herbs annual, 2–5 cm. Branches spreading, grayish. Leaves mainly in lower part of stem, resembling a rosette, withering in fruit, oblong, 0.5–1.5 cm. Upper leaves linear, spreading bristly, apex obtuse. Inflorescences dense, short; peduncle straight, 2–10 mm, thin; bracts linear, small. Calyx campanulate, very small, 1–1.5 mm, densely bristly, elongated to 5–7 mm in fruit; lobes free, straight, lanceolate, with sharply protruding midvein, apex slightly curved. Corolla blue, very small. Nutlets ovoid-oblong, 2–2.5 mm, with dense tubercles apically anchorlike. Fl. May-Jun, fr. Jul.

Stony slopes, gravel. NW Xizang [Afghanistan, Pakistan, Tajikistan, Uzbekistan].

4. *Rochelia peduncularis* Boissier, Pl. Orient., ser. 1, 7: 35. 1846.

总梗李果鹤虱 *zong geng luan guo he shi*

Herbs annual, grayish green, bristly pubescent. Stems 8–15 cm or more, branched from middle or above. Inflorescences terminal on branches, short, elongated in fruit. Leaves oblong-lanceolate or spatulate, 1–1.5 cm × 2–3 mm, reduced above, apex rounded. Pedicel spreading or horizontal, thick, 0.8–1.2 cm, later often recurved. Calyx small, 1.5–2 mm, accrescent in fruit; lobes lanceolate, curved outward, with hamate curved tips. Corolla blue, very small, 1–1.5 mm. Nutlets 3–4 mm, with dense white tubercles covered with very small sessile hooks. Fl. Jun, fr. Jul.

Flora of China 16: 417–418. 1995.

Stony slopes, gravel. W Xinjiang, NW Xizang [Afghanistan, Kazakhstan, Kyrgyzstan, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan; SW Asia].

5. *Rochelia cardiosepala* Bunge, Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans 7: 420. 1851.

心萼李果鹤虱 xin e luan guo he shi

Herbs annual, 10–40 cm, grayish green, appressed or spreading bristly. Stems branching from middle. Basal leaves few, oblong-elliptic, withering early; stem leaves linear-spatulate, 1–4 cm × 2–5 mm, long tapering at base. Inflorescences loose. Pedicel to 5–7 mm in fruit. Calyx lobes linear, small, 5–8 mm, elongated in fruit, wide, base triangular-deltate and cordate; midvein very thick, lateral veins prominent, forming a network. Corolla blue, very small, ca. 2.5 mm. Nutlets completely hidden in closed calyx, 3–4 mm, with dense tubercles minutely stellate at apex. Fl. Jun, fr. Jul.

Slopes. Weed in NW Xizang [Afghanistan, Kashmir, Kazakhstan, Kyrgyzstan, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan; SW Asia].

Flora of China 16: 417–418. 1995.