

141. CHESNEYA Lindley ex Endlicher, Gen. Pl. 1275. 1840.

雀儿豆属 que er dou shu

Zhu Xiangyun (朱相云); Kai Larsen

Spongiocarpella Yakovlev & N. Ulziykhutag.

Plants perennial. Root stout, woody. Stem lignified, short. Leaves imparipinnate, rarely 3-foliolate; stipules herbaceous, adnate to petiole; leaflets entire. Flowers solitary, axillary, rarely 1–4 in a raceme; peduncle with nodes bearing 1 bract. Calyx with 2 bracts at base; tube tubular, gibbous on one side at base, 5-lobed; 2 upper lobes connate, 3 lower lobes free, with brown glands at apex. Corolla yellow or purple; standard suborbicular or oblong, abaxially with dense short appressed hairs, ± longer than wings or keel. Stamens diadelphous; anthers uniform. Ovary sessile; stigma capitate, papillary. Legume oblong to linear, 1-loculed. Seeds reniform. Basic chromosome number $x = 8$.

About 21 species: C and SW Asia, Mediterranean region; seven species (two endemic) in China.

Chesneya dshungarica Goloskokov (Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 117. 1957) was recorded from Xinjiang by Chang Y. Yang (Claves Pl. Xinjiang. 3: 72. 1985). However, the present authors found no relevant specimens and therefore could not substantiate the occurrence of this species in China.

- 1a. Stipules deciduous; plants not cushionlike, with dense whitish appressed hairs; leaflets obovate or obovate-elliptic, apex rounded, emarginate, or truncate; legume 4–6 cm.
 - 2a. Racemes 1–4-flowered; mature legume glabrous 1. *C. cuneata*
 - 2b. Flowers solitary; mature legume with dense appressed hairs.
 - 3a. Leaflets 5–7 × 3–5 mm; pedicels ca. as long as or slightly longer than leaves; legume 35–50 × 4–5 mm 2. *C. crassipes*
 - 3b. Leaflets 7–15 × 4–10 mm; pedicels ca. as long as or shorter than leaves; legume 50–60 × 9–10 mm 3. *C. acaulis*
- 1b. Stipules persistent; plants cushionlike, with spreading whitish appressed hairs or glabrous; leaflets obovate, elliptic, or suborbicular, apex acute or subrounded; legume shorter than 3 cm.
 - 4a. Persistent stipules not becoming spines, darkened when dry, incurved or straight, leaflets without hard spine at apex.
 - 5a. Leaflets 19–41, glabrous, base conspicuously oblique 4. *C. polystichoides*
 - 5b. Leaflets 15–21, both surfaces with dense spreading appressed hairs, base rounded or slightly so 5. *C. nubigena*
 - 4b. Persistent stipules becoming spines; leaflets with hard spine at apex.
 - 6a. Corolla purple; bracteoles linear, ca. 8 mm; leaflets 3 or 4 pairs, both surfaces with whitish silky appressed hairs 6. *C. macrantha*
 - 6b. Corolla yellow; bracteoles subulate, shorter than 1 mm; leaflets 4–6 pairs, with whitish spreading short appressed hairs 7. *C. spinosa*

1. *Chesneya cuneata* (Benth) Ali, Scientist (Karachi) 3: 3. 1959.

截叶雀儿豆 jie ye que er dou

Gueldenstaedtia cuneata Benth in Royle, III. Bot. Himal. Mts. 200. 1835; *Calophaca cuneata* (Benth) Komarov; *Caragana cuneata* (Benth) Baker (1876), not Moench (1794).

Stems 10–15 cm tall, with many branches. Leaves 2–10 cm, 5–17-foliolate; stipules ovate-lanceolate, 5–6 mm, adnate to petiole for ca. 1/2 its length; axis and petiole with dense spreading long hairs or short appressed hairs; leaflet blades obovate or obovate-oblong, 4–16 × 2–4 mm, both surfaces with dense spreading long or short appressed hairs, base rounded, apex rounded, cuneate, or emarginate. Racemes umbellate, 1–4-flowered; peduncles 3–10 mm, with dense white appressed hairs; pedicels 2–4 mm. Calyx tubular, 15–17 mm, gibbous at base, inflated on one side; teeth lanceolate, shorter than tube, with black glands at apex. Corolla purple; standard 20–30 mm, with short appressed hairs abaxially; wings 18–28 mm; keel

slightly shorter than wings. Legume linear, 4–6 cm × 8–10 mm, glabrous when mature. Fl. Jul, fr. Aug.

Dry slopes on hills, gravelly areas, between stones; 3300–4300 m. Xinjiang, Xizang [India, Kashmir, Pakistan].

2. *Chesneya crassipes* Borissova, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 3: 207. 1936.

长梗雀儿豆 chang geng que er dou

Plants cushionlike. Stems woody at base, with branches. Leaves 3–8 cm, 11- or 13-foliolate; stipules lanceolate, 6–7 mm, adnate to petiole for ca. 1/2 its length, persistent; axis and petiole slender, with dense long hairs; leaflet blades dense, obovate-oblong, 5–7 × 3–5 mm, both surfaces with dense spreading long hairs, base rounded, apex emarginate or cuneate. Flowers solitary; pedicels 10–60 mm, with dense spreading white short hairs; bracts subulate; bracteoles almost same as bracts. Calyx tubular, 12–13 mm, with dense white short hairs, gibbous at base, inflated on one side; teeth lanceolate, slightly shorter than tube, with red-brown glands at apex. Corolla purple or orange-yellow with purple; standard 13–18 mm, lamina ellip-

tic. Ovary sessile, glabrous. Legume linear, 3.5–4 cm × 4–5 mm, with dense appressed hairs. Fl. Jul, fr. Aug.

Gravelly areas; ca. 3800 m. Xizang [Pakistan, Tajikistan].

3. *Chesneya acaulis* (Baker) Popov, Byull. Sredne-Aziatsk. Gosud. Univ. 15(2, Suppl.): 10. 1927.

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Caragana acaulis Baker, J. Linn. Soc., Bot. 18: 44. 1880; *Calophaca acaulis* (Baker) Komarov.

Plants cushionlike. Stems woody at base, 3–8 cm tall. Leaves 4–8 cm, 13–17-foliolate; stipules ovate-lanceolate, 5–6 mm, adnate to petiole for ca. 1/2 its length; axis and petiole with dense white appressed hairs; leaflet blades obovate or obovate-oblong, 7–15 × 4–10 mm, both surfaces with dense white appressed hairs, base subrounded, apex emarginate, rarely cuneate. Flowers solitary; pedicels 3–4 cm, slightly shorter or ca. as long as leaves, with white short appressed hairs; bracts subulate; bracteoles ca. as long as bracts. Calyx tubular, 12–13 mm, with dense white short hairs, gibbous at base, inflated on one side; teeth lanceolate, slightly shorter than tube, with red-brown glands at apex. Corolla purple or orange-yellow; standard 13–18 mm, lamina elliptical, with dense white short hairs abaxially. Ovary sessile, glabrous. Legume linear, 5–6 cm × 9–10 mm, with dense appressed hairs. Fl. Jul, fr. Aug.

Gravelly areas; 2900–3000 m. Xizang [Afghanistan, Pakistan].

4. *Chesneya polystichoides* (Handel-Mazzetti) Ali, Scientist (Karachi) 3: 10. 1959.

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Calophaca polystichoides Handel-Mazzetti, Symb. Sin. 7: 552. 1933; *Spongiocarpella polystichoides* (Handel-Mazzetti) Yakovlev.

Plants cushionlike. Stems woody at base, prostrate, ca. 25 mm in diam., branched, bark red-brown, with dense persistent petioles and stipules. Leaves 3–14 cm, 19–41-foliolate; stipules linear, ca. 15 mm, adnate to petiole for ca. 1/2 its length, rarely with short white hairs; axis and petiole rarely with long hairs, incurved after drying, persistent; leaflets sessile; leaflet blades dense, abaxially gray-white, adaxially dark green, oblong, ovate, or nearly orbicular, 3–11 × 2–6 mm, both surfaces hairy, base conspicuously oblique, apex rounded, seldom truncate or emarginate. Flowers solitary; pedicels 10–20 mm, with spreading white long hairs; bracts linear; bracteoles slightly shorter than bracts. Calyx tubular, 12–15 × 5–7 mm, rarely with long hairs, gibbous at base, inflated on one side; teeth triangular-lanceolate, ca. 1/2 as long as tube. Corolla yellow; standard 20–22 mm, lamina oblong, with dense white short hairs abaxially; keel 15–17 mm, auriculate, ca. as long as wings. Ovary sessile, glabrous. Legume narrowly elliptical, 2.5–3.5 cm × ca. 8 mm, leathery, slightly applanate, glabrous. Fl. Jul, fr. Aug.

• Slopes, on rocks, meadows; 3400–4400 m. Sichuan, Xizang, Yunnan.

5. *Chesneya nubigena* (D. Don) Ali, Scientist (Karachi) 3: 4. 1959.

云雾雀儿豆 yun wu que er dou

Plants cushionlike. Stems woody at base, branched, with persistent petioles and stipules. Leaves 3–15 cm, 15–21-foliolate; stipules linear, ca. 10 mm, adnate to petiole for ca. 1/2 its length, upper part rounded or 2- or 3-lobed, with dense long hairs; axis and petiole with dense spreading long hairs, incurved or erect after drying, persistent; leaflet blades dense, oblong, 3–8 × 1–4 mm, both surfaces with dense spreading long hairs, base rounded or slightly oblique, apex acute. Flowers solitary; pedicels 10–40 mm, with dense spreading white long hairs; bracts linear, ca. 10 mm; bracteoles slightly shorter than bracts. Calyx tubular, 10–15 mm, rarely with long hairs, gibbous at base, inflated on one side; teeth lanceolate, ca. 1/2 as long as tube. Corolla yellow or purple; standard 20–30 mm, lamina broadly ovate or suborbicular, with dense white short hairs abaxially, apex emarginate; wings 18–28 mm; keel ca. as long as wings, without auricles. Ovary sessile, with dense white long hairs. Legume narrowly elliptical, 2–3 cm × 7–8 mm, rarely with long white appressed hairs, slightly applanate, leathery. Fl. Jul–Aug, fr. Aug–Sep.

Rocky alpine slopes, within shrubs, slopes, meadows, gravelly areas; 3600–5300 m. Xizang, Yunnan [Bhutan, India, Nepal].

- 1a. Flowers yellow; plants 11–16 cm; leaflets 4–8 × 2–4 mm, with a few persistent petioles 5a. subsp. *nubigena*
- 1b. Flowers purple; plants 3.5–6 cm; leaflets 3–5 × 1–2 mm, with many persistent petioles 5b. subsp. *purpurea*

5a. *Chesneya nubigena* subsp. *nubigena*

云雾雀儿豆(原亚种) yun wu que er dou (yuan ya zhong)

Astragalus nubigenus D. Don, Prodr. Fl. Nepal. 245. 1825; *Calophaca crassicaulis* (Benth. ex Baker) Komarov; *Caragana crassicaulis* Benth. ex Baker; *Chesneya intermedia* (Yakovlev) Z. G. Qian; *C. paucifoliolata* (Yakovlev) Z. G. Qian; *C. yunnanensis* (Yakovlev) Z. G. Qian; *Spongiocarpella intermedia* Yakovlev; *S. nubigena* (D. Don) Yakovlev; *S. nubigena* subsp. *kumaoensis* Yakovlev; *S. paucifoliolata* Yakovlev; *S. yunnanensis* Yakovlev.

Plants tall, 11–16 cm. Leaflet blades 4–8 × 2–4 mm, with a few persistent petioles. Flowers yellow. Fl. Jul–Aug, fr. Aug–Sep.

Rocky alpine slopes, within shrubs, slopes, meadows; 3600–5300 m. Xizang, Yunnan [India, Nepal].

5b. *Chesneya nubigena* subsp. *purpurea* (P. C. Li) X. Y. Zhu, Acta Phytotax. Sin. 34: 561. 1996.

紫花雀儿豆 zi hua que er dou

Chesneya purpurea P. C. Li, Acta Phytotax. Sin. 19: 236. 1981; *Spongiocarpella purpurea* (P. C. Li) Yakovlev.

Plants small, 3.5–6 cm. Leaflet blades 3–5 × 1–2 mm, with many persistent petioles. Flowers purple. Fl. Jul, fr. Aug.

Within shrubs, hilly slopes, meadows, gravelly areas; 4700–5200 m. Xizang [Bhutan].

6. *Chesneya macrantha* S. H. Cheng ex H. C. Fu, Fl. Intra-mongol. 3: 291. 1978.

大花雀儿豆 da hua que er dou

Chesneya potaninii (Yakovlev) Govaerts; *Oxytropis grubovii* N. Ulziykhutag (1971), not *Chesneya grubovii* Yakovlev (1979); *Spongiocarpella grubovii* (N. Ulziykhutag) Yakovlev; *S. potaninii* Yakovlev.

Plants cushionlike. Stems shortened, 5–10 cm tall. Leaves 2–4 cm, 7- or 9-foliolate; stipules ovate, ca. 4 mm, submembranous, adnate to petiole for ca. 1/2 its length, persistent, with dense white long appressed hairs; axis and petiole rarely with spreading white long hairs, persistent and forming spines at apex; leaflet blades elliptic or obovate, 5–6 × ca. 3 mm, both surfaces with white silky short appressed hairs, base cuneate, apex acute or spinelike. Flowers solitary; pedicels 4–5 mm; bracts linear, ca. 8 mm; bracteoles similar to bracts. Calyx tubular, ca. 15 mm, with dense long hairs and dark brown glands, gibbous at base, inflated on one side; teeth linear, almost as long as tube, with glands at apex. Corolla purple; standard ca. 25 mm, lamina oblong, with dense short hairs abaxially; wings ca. 20 mm; keel shorter than wings. Ovary sessile, with dense hairs. Legume unknown. Fl. Jun, fr. Jul.

Dry slopes. Nei Mongol, Xinjiang [Mongolia].

7. *Chesneya spinosa* P. C. Li, Acta Phytotax. Sin. 19: 236. 1981.

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Spongiocarpella spinosa (P. C. Li) Yakovlev.

Plants cushionlike. Stems short, 4–6 cm tall, woody at base, branched, with dense persistent spinelike petioles and stipules. Leaves 2–2.5 cm, 9–13-foliolate; stipules ovate, 2–3 mm, papery, adnate to petiole for ca. 1/2 its length, glabrous, rarely with short white hairs; axis and petiole rarely with long hairs, persistent and forming spines; leaflet blades narrowly oblong, 3–5 × ca. 1.5 mm, both surfaces with dense white short hairs when young, becoming glabrous, base rounded or slightly oblique, apex acute, rounded, or truncate, with short spines. Flowers solitary; pedicels shorter than leaves; bracts lanceolate, ca. 1.5 mm; bracteoles subulate, shorter than 1 mm. Calyx tubular, 14–16 mm, rarely with white short hairs and brown glands, gibbous at base, inflated on one side; teeth lanceolate, with glands and hard acute at apex. Corolla yellow; standard 24–26 mm, lamina suborbicular, with dense white short hairs abaxially; wings 23–25 mm, claw slightly longer than lamina; keel 19–21 mm. Ovary sessile, with dense white short hairs. Legume oblong, 2–2.5 cm × 4–5 mm, rarely with long white hairs. Fl. Jul, fr. Aug.

• On gravelly slopes of hills; 3900–4200 m. Xizang.

