

72. LEIOSPORA (C. A. Meyer) Dvorák, Spisy Prir. Fak. Univ. J. E. Purkinje Brne 497: 356. 1968.

光籽芥属 *guang zi jie shu*

Parrya R. Brown subgen. *Leiospora* C. A. Meyer in Ledebour, Fl. Altaic. 3: 28. 1831.

Herbs perennial, scapose, rhizomatous or with a caudex covered with petiolar remains of previous years. Trichomes simple or short-stalked, forked, sometimes absent. Stems often absent. Basal leaves petiolate, rosulate, simple, entire or toothed. Cauline leaves absent. Racemes ebracteate, not elongated in fruit, or flowers solitary on pedicels originating from center of basal rosette. Fruiting pedicels erect-ascending. Sepals oblong-linear, erect, unequal, base of lateral pair saccate, margin membranous. Petals pink or purple; blade obovate, apex rounded; claw strongly differentiated from blade, longer than sepals. Stamens 6, tetradynamous; filaments not dilated at base; anthers linear, obtuse at apex. Nectar glands 2, lateral; median glands absent. Ovules 18–50 per ovary. Fruit dehiscent siliques, linear to linear-lanceolate, strongly latiseptate, sessile, readily detached from pedicel; valves leathery, glabrous, torulose, margin angled, with prominent midvein and marginal veins, lateral veins obscure, apex persistently united with replum; replum rounded; septum complete, membranous, translucent; style absent; stigma conical, 2-lobed, lobes prominent, free, decurrent. Seeds uniseriate or biseriate, broadly winged, proximally margined, or wingless, oblong or orbicular, flattened; seed coat smooth, not mucilaginous when wetted; cotyledons accumbent.

Six species: China, India, Kashmir, Kazakstan, Kyrgyzstan, Mongolia, Russia, Tajikistan; four species in China.

Leiospora is remotely related to *Parrya*, from which it is easily distinguished by having fruit readily detached from the pedicel, replum terete, valves with marginal veins prominent, margin angled, and apex adnate to the replum, and stigmas sessile with free lobes. *Parrya* has fruit persistent on the pedicel, replum strongly flattened, valves without marginal veins, margin flat, and apex readily detached from the replum, and stigmas borne on distinct styles and with connivent lobes.

- 1a. Flowers in shortly pedunculate racemes 1. *L. bellidifolia*
- 1b. Flowers solitary from center of rosette.
 - 2a. Seeds oblong, wingless; plants glabrous or rarely pubescent; petiole not ciliate 4. *L. exscapa*
 - 2b. Seeds suborbicular, broadly winged; plants pubescent; petiole usually ciliate.
 - 3a. Plants sparsely pubescent; leaf and calyx trichomes exclusively simple 3. *L. eriocalyx*
 - 3b. Plants often densely pubescent, rarely glabrescent; leaf and calyx trichomes short-stalked, forked, mixed with simple ones 2. *L. pamirica*

1. *Leiospora bellidifolia* (Danguy) Botschantzev & Pachomova, Bot. Zhurn. (Moscow & Leningrad) 57: 668. 1972.

雏菊叶光籽芥 *chu ju ye guang zi jie*

Parrya bellidifolia Danguy, J. Bot. (Morot) 21: 51. 1908.

Plants 5–10 cm tall, rhizomatous, with few-branched caudices covered with petiolar remains of previous years. Petiole 0.5–2 cm, broadened at base, often ciliate; leaf blade orbicular, spatulate, or obovate, 0.5–2 × 0.5–1.5 cm, subglabrous or pubescent with short simple trichomes, base rounded or cuneate, margin entire or few toothed, apex obtuse to rounded. Racemes (3–)7–22-flowered. Fruiting pedicels erect-ascending, glabrous, 1–3 cm. Sepals oblong, 7–10 × 1.5–2 mm, glabrous or sparsely pubescent, white or purple margined. Petals obovate, 1.7–2.3 cm × 4–7 mm, apex rounded; claw 1–1.3 cm. Filaments white, median pairs 4–7 mm, lateral pair 2–4 mm; anthers linear, 2.5–3 mm. Ovules 30–50 per ovary. Fruit linear to linear-lanceolate, 2.5–5.5 cm × 4–7 mm, margin straight. Seeds orbicular to orbicular-ovate, 2–3 mm in diam., uni- or biseriate, flattened; wing to 0.5 mm wide,

strongly undulate, brown proximally, white distally. Fl. and Fr. Jun–Aug.

Slopes; 3200–3300 m. SW Xinjiang [Tajikistan].

This species was previously recorded from China in Fl. Tajikistan (5: 120. 1978). That record is here confirmed based on *Duvnogorskaya s.n.* (LE), collected from Kashi (Kashgar), SW Xinjiang.

2. *Leiospora pamirica* (Botschantzev & Vvedensky) Botschantzev & Pachomova, Bot. Zhurn. (Moscow & Leningrad) 57: 669. 1972.

帕米尔光籽芥 *pa mi er guang zi jie*

Parrya pamirica Botschantzev & Vvedensky, Novosti Sist. Vyssh. Rast. 1965: 279. 1965.

Plants 5–10(–15) cm tall, densely cespitose; caudex branched, densely covered with petiolar remains of previous years. Petiole broadened at base, ciliate, (0.5–)1–3(–4.2) cm; leaf blade spatulate or oblanceolate, rarely obovate, elliptic, or oblong, (0.7–)1–4(–5) cm × (3–)4–10(–15) mm, sparsely to densely pubescent with simple and short-stalked, forked trichomes, base cuneate or attenuate, margin entire or rarely few toothed, apex subacute to rounded. Flowers 2–7 per rosette, on solitary pedicels from center of rosette. Fruiting pedicels erect-ascending, glabrous, (1–)2–6(–7) cm. Sepals oblong, 6–10 × 1.5–2 mm, glabrous or sparsely pubescent, white margined. Petals obovate, (1.3–)1.5–2.2(–2.6) cm × (4–)6–8(–9) mm, apex

rounded; claw (6–)8–11 mm. Filaments white, median pairs (4.5–)6–8 mm, lateral pair (2.5–)4–6 mm; anthers linear, 2.5–3 mm. Ovules 24–40 per ovary. Fruit linear to linear-lanceolate, (2.5–)3.5–7(–9) cm × 3–6(–7) mm, margin straight or undulate. Seeds orbicular, (2.5–)3–4 mm in diam., uni- or biseriate, flattened, broadly winged; wing undulate, 0.5–1 mm wide. Fl. and Fr. Jul–Sep.

Dry stony plains, rocky cliffs; 3900–5500 m. Xinjiang, Xizang [Kashmir, Tajikistan].

The protologue of *Parrya pamirica* indicated that the species occurs in China, but no specimens were cited. In fact, Chinese plants have been repeatedly misidentified as *L. exscapa* (see below), both in Chinese herbaria and in the account in FRPS (as *Parrya exscapa*).

Leiospora pamirica is highly variable in the density of its indumentum; in very sparsely pubescent plants, branched trichomes can still be found along the leaf margin.

3. *Leiospora eriocalyx* (Regel & Schmalhausen) Dvůrák, Spisy Prir. Fak. Univ. J. E. Purkinje Brne 497: 357. 1968.

毛萼光籽芥 mao e guang zi jie

Parrya eriocalyx Regel & Schmalhausen, Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 234. 1877.

Plants 2–10 cm tall, densely caespitose; caudex many branched, densely covered with petiolar remains of previous years. Petiole broadened at base, ciliate; leaf blade spatulate or obovate, rarely oblanceolate, 1–4 cm × 3–10 mm, pubescent with short simple trichomes, base cuneate, margin entire or with few blunt teeth, apex subacute. Flowers 2–5 per rosette, on solitary pedicels from center of rosette. Fruiting pedicels erect-ascending, glabrous or sparsely pubescent, 1–5 cm. Sepals oblong, 5–8 × 1.5–2 mm, glabrous or sparsely pubescent, white or sometimes purple margined. Petals obovate, 1.1–1.8 cm × 3–7 mm, apex rounded; claw 0.9–1.1 cm. Filaments white, median pairs 5.5–7 mm, lateral pair 3.5–4.5 mm; anthers linear, 2.5–3 mm. Fruit linear to linear-lanceolate, 3–5 cm × 3–6 mm, margin straight or undulate. Seeds orbicular, 3–4 mm in diam., uni- or biseriate, flattened, broadly winged. Fl. and Fr. Jul–Sep.

Gravelly slopes; 3700–4400 m. Xinjiang [Kazakstan, Kyrgyzstan, Tajikistan].

4. *Leiospora exscapa* (C. A. Meyer) Dvůrák, Spisy Prir. Fak. Univ. J. E. Purkinje Brne 497: 357. 1968.

无茎光籽芥 wu jing guang zi jie

Parrya exscapa C. A. Meyer in Ledebour, Fl. Altaic. 3: 28. 1831; *Neuroloma exscapum* (C. A. Meyer) Steudel.

Plants 5–10 cm tall, caespitose; caudex thick, few branched, densely covered with petiolar remains of previous years. Petiole broadened at base, glabrous, 0.5–1.5 cm; leaf blade orbicular, obovate, or spatulate, rarely oblanceolate, 1–3 × 0.6–1.5 cm, glabrous or rarely sparsely pubescent at margin with exclusively simple trichomes, base rounded or cuneate, margin obtusely dentate or repand, apex rounded or subacute.

Flowers 1–4 per rosette, on solitary pedicels from center of rosette. Fruiting pedicels erect-ascending, glabrous, 1–2.5 cm. Sepals ob-long, 7–9 × 1.5–2 mm, glabrous, white or sometimes purple margined. Petals obovate, 1.4–2 cm × 6–10 mm, apex rounded; claw 7–9 mm. Filaments white, median pairs 6–8 mm, lateral pair 3.5–4.5 mm; anthers linear, 2.5–3 mm. Ovules 18–30 per ovary. Fruit linear to linear-lanceolate, 4–9 cm × 5–7 mm, margin straight or undulate. Seeds oblong, 2.7–3.5 × 1.5–2 mm, biseriate, flattened, wingless or narrowly margined proximally. Fl. and Fr. Jul–Sep. Mountain slopes. N Xinjiang (Altay Shan) [Kazakstan, Mongolia, Russia].

Almost all of the specimens identified in Chinese herbaria as *Leiospora exscapa*, as well as the account in FRPS (as *Parrya exscapa*), are based on misidentified plants of *L. pamirica*. True *L. exscapa* is very rare in China and appears to be restricted to Altay Shan in N Xinjiang. It is readily distinguished from *L. pamirica* by being totally glabrous, or exclusively with simple trichomes, and by having totally oblong and wingless (vs. orbicular and broadly winged) seeds. Records of *L. exscapa* in the floras of India and Pakistan are also based on misidentified plants of *L. pamirica*.

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