

97. THELLUNGIELLA O. E. Schulz in Engler, Pflanz. 86(IV. 105): 251. 1924.

盐芥属 *yan jie shu*

Herbs annual, often glaucous above. Trichomes absent. Stems erect or ascending, sometimes prostrate. Basal leaves petiolate, somewhat fleshy, rosulate or not, often withered by flowering, simple, entire or rarely toothed or pinnatifid. Cauline leaves shortly petiolate or sessile, attenuate and not auriculate, auriculate, sagittate, or amplexicaul at base, entire or rarely obscurely dentate. Racemes few to several flowered, ebracteate. Fruiting pedicels ascending or divaricate. Sepals ovate or oblong, erect, base of lateral pair not saccate. Petals white, longer or shorter than sepals, rarely absent; blade obovate or oblanceolate, apex obtuse; claw obscurely differentiated from blade. Stamens 6, slightly tetradynamous; filaments not dilated at base; anthers ovate or oblong, apex obtuse or apiculate. Median glands absent; lateral glands 1 on each side of lateral stamen. Ovules 15–90 per ovary. Fruit dehiscent siliques, linear, terete or slightly latiseptate, sessile or rarely shortly stipitate; valves with a distinct midvein, glabrous, torulose; replum rounded; septum complete; style obsolete or rarely to 0.6 mm; stigma capitate, entire. Seeds uniseriate or biseriate, wingless, oblong or broadly ovate, plump or slightly flattened; seed coat minutely reticulate, mucilaginous or not when wetted; cotyledons incumbent.

Three species: saline habitats from SW to E Asia, one species disjunct in North America; three species in China.

- 1a. Cauline leaves linear to linear-oblanceolate or linear-oblong, shortly petiolate, not auriculate at base; infructescence rachis flexuous; petals absent or rarely as long as sepals; secondary veins of fruit valve conspicuous 3. *T. parvula*
- 1b. Cauline leaves cordate, ovate, or oblong, sessile, auriculate or amplexicaul at base; infructescence rachis straight; petals well-developed and much longer than sepals; secondary veins of fruit valve obscure.
 - 2a. Seeds uniseriate, (0.5–)0.6–0.8 mm; ovules 15–26 per ovary; fruit 0.4–0.5 mm wide 1. *T. halophila*
 - 2b. Seeds biseriate, 0.4–0.5 mm; ovules 55–90 per ovary; fruit (0.7–)0.8–1 mm wide 2. *T. salsuginea*

1. *Thellungiella halophila* (C. A. Meyer) O. E. Schulz in Engler, Pflanz. 86(IV. 105): 253. 1924.

小盐芥 *xiao yan jie*

Sisymbrium halophilum C. A. Meyer in Ledebour, Fl. Altaic. 3: 143. 1831; *Hesperis halophila* (C. A. Meyer) Kuntze; *Stenophragma halophilum* (C. A. Meyer) B. Fedtschenko.

Herbs (2–)6–22(–30) cm tall. Stems erect or ascending, simple or few branched at base. Basal leaves rosulate; petiole 1–6 mm; blade obovate, spatulate, or oblong, 3–10(–20) × 1–3 (–5) mm, margin dentate, pinnatifid, or entire, apex obtuse. Middle cauline leaves oblong or ovate, sessile, 3–12(–20) × 1–3(–5) mm, base auriculate or rarely deeply sagittate-amplexicaul, margin dentate or entire, apex acute or obtuse. Infructescence rachis straight. Fruiting pedicels slender, divaricate to divaricate-ascending, 2–7(–10) mm. Sepals oblong, 1–1.5 × 0.5–0.6 mm. Petals white, obovate, 2–3 × 1–1.2 mm. Filaments 1–1.5 mm; anthers oblong, 0.2–0.4 mm, apiculate. Ovules 15–26 per ovary. Fruit (0.5–)0.7–1.5(–2) cm × 0.4–0.5 mm, slightly torulose, sessile; valves obscurely veined; style 0.1–0.5 mm. Seeds brown, oblong, uniseriate, (0.5–)0.6–0.8 × 0.3–0.4 mm. Fl. and fr. May–Aug.

Saline areas. Xinjiang [Kazakhstan, Russia (Siberia)].

Records in FRPS of *Thellungiella halophila* from Hebei, Henan, Jiangxi, Nei Mongol, and Shandong were based on misidentified plants of *T. salsuginea*. The differences in stem branching, margin of basal leaves, and fruit length given in FRPS and other floras are unreliable, and only the characters in the key above consistently separate the two species.

2. *Thellungiella salsuginea* (Pallas) O. E. Schulz in Engler, Pflanz. 86(IV. 105): 252. 1924.

盐芥 *yan jie*

Sisymbrium salsugineum Pallas, Reise Russ. Reich. 2: 466. 1773; *Arabidopsis salsuginea* (Pallas) N. Busch; *Hesperis salsuginea* (Pallas) Kuntze; *Stenophragma salsugineum* (Pallas) Prantl.

Herbs (6–)10–30(–40) cm tall. Stems erect or ascending, simple or several branched at base. Basal leaves rosulate or not; petiole 5–10 mm; blade obovate, spatulate, or oblong, 0.5–1.5(–2.5) cm × 2–5 mm, margin entire or rarely dentate or pinnatifid, apex obtuse. Middle cauline leaves cordate, ovate, or oblong, sessile, 0.4–1.7(–2.5) cm × 1–7(–10) mm, base deeply sagittate-amplexicaul, rarely auriculate, margin entire or repand, apex acute or obtuse. Infructescence axis straight. Fruiting pedicels slender, divaricate to divaricate-ascending, 3–10 mm. Sepals oblong, 1–1.5 × 0.5–0.6 mm. Petals white, obovate, 2–3 × 1–1.7 mm. Filaments 1–1.5 mm; anthers oblong, 0.2–0.4 mm, apiculate. Ovules 55–96 per ovary. Fruit 0.7–1.6(–2) cm × (0.7–)0.8–1 mm, distinctly torulose, sessile; valves obscurely veined; style 0.1–0.3 mm. Seeds brown, oblong, biseriate, 0.4–0.5 × 0.2–0.3 mm. Fl. and fr. Apr–Jul.

Saline flats, river banks, steppe. Hebei, Henan, Jiangsu, Jilin, Nei Mongol, Shandong, Xinjiang [Kazakhstan, Kyrgyzstan, Mongolia, Russia, Turkmenistan, Uzbekistan; North America].

3. *Thellungiella parvula* (Schrenk) Al-Shehbaz & O’Kane, Novon 5: 309. 1995.

条叶盐芥 *tiao ye yan jie*

Diplotaxis parvula Schrenk in Fischer & C. A. Meyer, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 2: 199. 1844; *Arabidopsis parvula* (Schrenk) O. E.

Schulz; *Sisymbrium parvulum* (Schrenk) Lipsky;
Stenophragma parvulum (Schrenk) B. Fedtschenko.
Herbs (4–)7–25(–30) cm tall. Stems erect or ascending,
simple or few branched at base. Basal leaves not
rosulate, withered by flowering time. Middle cauline
leaves shortly petiolate, linear to linear-ob lanceolate or
linear-oblong, (0.4–)1.5–3(–4) cm × 0.5–2 mm, base
attenuate and not auriculate, margin entire or rarely 1-
or 2-toothed on each side, apex rounded or obtuse.
Infructescence axis flexuous. Fruiting pedicels slender,
glabrous, divaricate to divaricate-ascending, 1–7 mm.
Sepals oblong, 1–1.5 × 0.5–0.6 mm, glabrous. Petals
absent, rarely present and white, oblanceolate and to 1.5
mm. Filaments 1.5–2 mm; anthers ovate, 0.1–0.2 mm,
apex obtuse. Ovules 25–50 per ovary. Fruit (0.5–)0.7–
1.5(–2) cm × 1.1–1.4 mm, torulose, sub-sessile or on a
gynophore to 0.3 mm; valves prominently veined; style
0.2–0.6 mm. Seeds brown, ovate, 0.5–0.8 × 0.4–0.6 mm.
Fl. and fr. May–Jun. $2n = 14$.

Saline steppe. Xinjiang [Kazakstan, Russia, Turkmenistan, Uz-
bekistan; SW Asia].

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