

9. ROSULARIA (de Candolle) Stapf, Bot. Mag. 149: t. 8985. 1923.

瓦莲属 wa lian shu

Umbilicus de Candolle sect. *Rosularia* de Candolle, Prodr. 3: 399. 1828; *Sempervivella* Stapf.

Herbs perennial, usually hairy. Rootstock usually fleshy. Leaves mostly in dense, basal rosettes, usually with several rosettes per plant, alternate, sessile, flat. Flowering stems often several, arising from axils of rosette leaves (or solitary and arising from center of rosette); stem leaves alternate. Inflorescence lateral, cymose-corymbiform, paniculate-corymbiform, or spicate-paniculate, lax to dense. Flowers bisexual, 5–9-merous. Sepals connate at base. Corolla pink or white, sometimes with red or purple markings, campanulate or cupular; lobes partly connate at base, limb erect to spreading, membranous. Stamens 2 × as many as petals, inserted above corolla base, ca. 2 × as long as petals. Nectar scales cuneate to cuneate-spatulate-quadrate. Carpels erect, free, often hairy. Follicles erect, free, many seeded. Seeds striate.

Thirty-six species: C and SW Asia; three species in China.

- 1a. Rosette leaves glabrous or very sparsely glandular hairy; flowers 6–8-merous 1. *R. alpestris*
1b. Rosette leaves densely glandular hairy; flowers 5-merous.
2a. Leaf rosettes 5–10 cm in diam.; rosette leaves 1.2–2 cm wide 2. *R. platyphylla*
2b. Leaf rosettes 1.5–2 cm in diam.; rosette leaves ca. 0.5 cm wide 3. *R. turkestanica*

1. **Rosularia alpestris** (Karelin & Kirilov) Borissova in Komarov, Fl. URSS 9: 129. 1939.

长叶瓦莲 chang ye wa lian

Umbilicus alpestris Karelin & Kirilov, Bull. Soc. Imp. Naturalistes Moscou 15: 354. 1842; *Rhodiola durisii* (Raymond-Hamet) S. H. Fu; *Sedum durisii* Raymond-Hamet; *S. olgae* Regel & Schmalhausen ex Regel; *S. schlagintweitii* Fröderström; *S. umbilicoides* Regel; *Sempervivella acuminata* (Decaisne) A. Berger; *Sempervivum acuminatum* Decaisne.

Rootstock to 1.5 cm thick. Rosette 1.5–3 cm in diam.; rosette leaves oblong-lanceolate to oblong, (9–)15–25(–30) × (2–)3–6 mm, glabrous or very sparsely glandular, apex acuminate. Flowering stem axillary from rosette leaves, erect or ascending, 5–12(–15) cm, leafy, glabrous; stem sessile, oblong to oblong-lanceolate, leaves flat, 5–10 × 2–2.5 mm, adaxially glabrous, margin hispidulous-ciliate distally, apex acuminate. Inflorescences cymose-corymbiform, 2–12(–20)-flowered, glabrous; bracts small, ovate-lanceolate. Flowers 6–8-merous; pedicel shorter than corolla on proximal flowers but elongating on distal ones. Sepals lanceolate, ca. 1/2 as long as corolla, glabrous, veins 3, apex acute to acuminate. Corolla white, or reddish with purple or red abaxial keel, 6–9 mm; lobes basally connate, oblong-lanceolate, veins 3, apex reflexed and acute. Stamens 12–16, shorter than corolla. Nectar scales suborbicular. Follicles 2.5–3.5 mm, apex beaked; beak filiform. Seeds numerous, ovoid. Fl. Jun–Jul.

Scrub-covered slopes, rock crevices; 1500–5000 m. Xinjiang, Xizang [Russia].

2. **Rosularia platyphylla** (Schrenk) A. Berger in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 18a: 466. 1930.

卵叶瓦莲 luan ye wa lian

Umbilicus platyphyllus Schrenk in Fischer & C. A. Meyer, Enum. Pl. Nov. 1: 71. 1841.

Rootstock to 2.5 cm thick. Rosette 5–10 cm in diam.; rosette leaves rhomboid-obovate to spatulate, flat, 15–40 × 12–20 mm, densely glandular hairy, base sometimes attenuate, margin ciliate, apex obtuse and emarginate or subacute. Flowering stems 1–4, axillary from outer rosette leaves, simple, ascending, 5–10 cm, puberulent; stem leaves remote, sessile, oblong to linear, 10–15 × 4–5 mm, puberulent, margin ciliate. Inflorescences cymose-corymbiform, 3–5 × 3–4 cm, glandular-pubescent, many flowered; bracts linear-oblong, small. Flowers 5-merous; pedicel shorter than corolla. Sepals ovate, ca. 3 mm. Corolla white, 5–7 mm; tube ca. 2.5 mm; lobes reflexed, ovate. Stamens 10, shorter than corolla. Follicles ovoid-oblong, apex beaked; beak linear. Seeds brown, oblong-ovoid. Fl. Jun–Jul, fr. Aug. Terraces in valleys, slopes in ravines; 2200–2800 m. C Xinjiang [Kazakstan, Kyrgyzstan].

3. **Rosularia turkestanica** (Regel & Winkler) A. Berger in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 18a: 466. 1930.

小花瓦莲 xiao hua wa lian

Umbilicus turkestanicus Regel & Winkler, Trudy Imp. S.-Peterburgsk. Bot. Sada 6(2): 301. 1879; *Cotyledon turkestanica* (Regel & Winkler) O. Fedtschenko & B. Fedtschenko.

Rootstock thick, with numerous fibrous roots. Rosette 1.5–2 cm in diam.; rosette leaves lanceolate to oblong-lanceolate, 10–20 × ca. 5 mm, densely glandular hairy, apex acuminate. Flowering stem axillary from outer rosette leaves, ascending, 13–20 cm, glabrous; stem leaves remote, oblong to linear, 4–7 × 1–2 mm.

Inflorescences cymose-paniculate, with subscorpioid, secund branches. Flowers 5-merous; pedicel shorter than flowers. Sepals lanceolate to elliptic-lanceolate, ca. 2.5 mm, apex acute. Corolla yellow or white with purple striations, campanulate, ca. 5 mm; lobes erect, elliptic-lanceolate. Stamens 10, equaling corolla. Follicles narrowly lanceolate, ca. 5.5 mm, apex acuminate and beaked; beak ca. 1.5 mm. Fl. Jun–Jul.

Slopes, deserts. N Xinjiang (Manas Xian) [Kazakstan, Kyrgyzstan].

Eggl (Bradleya 6 (Suppl.): 75. 1988) did not consider this species to be separable from *Rosularia platyphylla*.

