

### 11. LEDUM Linnaeus, Sp. Pl. 1: 391. 1753.

杜香属 du xiang shu

Fang Ruizheng (方瑞征 Fang Rhui-cheng); David F. Chamberlain

Shrubs evergreen, small, multibranched, with fragrant resin. Leaves shortly petiolate; leaf blade linear, linear-lanceolate, or narrowly oblong, leathery, abaxially with white and/or rusty brown-pilose or woolly indumentum, margin entire, recurved. Inflorescences terminal, racemose, many-flowered; bracts present at peduncle base, dry, membranous, soon deciduous; bractlets absent. Calyx small, 5-lobed, persistent. Corolla white, divided to base; lobes imbricate in bud. Stamens (5–)8–10, protruding beyond corolla; filaments linear; anthers small, abaxially connected, globose, without appendages. Flower disk 8–10-lobed. Ovary globose, 5-locular, lepidote. Style linear; stigma obtuse, 5-lobed. Capsule ellipsoid or cylindric, opening from base. Seeds tiny.

Three or four species: circumboreal in temperate and cold-temperate regions; one species in China.

DNA sequencing has shown that this genus should be included within *Rhododendron* subg. *Rhododendron*, as *R.* subsect. *Ledum* (Linnaeus) Kron & Judd (Syst. Bot. 15: 67. 1990). It has affinities with *R.* subsect. *Micrantha*.

*Ledum subulatum* (Nakai) A. P. Khokhrjakov & Mazurenko (in Kharkevich, Sosud. Rast. Sovetsk. Dal'nego Vostoka 5: 125. 1991; *L. palustre* var. *subulatum* Nakai, Bot. Mag (Tokyo) 31: 103. 1917; *Rhododendron subulatum* (Nakai) Harmaja) was described from N Korea and has been recorded also from Japan and (mainly) Russia. Harmaja (Ann. Bot. Fenn. 39: 183–184. 2002) also cited “NE China,” but without locality. The taxon is said to have a subulate leaf blade, 10–36 × 1–3 mm, with a revolute margin and reddish brown, floccose hairs abaxially. From this description it is unclear how distinct *L. subulatum* is from *L. palustre*.

#### 1. *Ledum palustre* Linnaeus, Sp. Pl. 1: 391. 1753.

杜香 du xiang

Shrubs erect or creeping, to 50 cm tall. Branches slender; young branches densely covered with rust-colored wool; terminal buds conspicuous, ovoid, scales densely rufous-woolly. Leaf blade linear, linear-lanceolate, or narrowly oblong, 1–8 × 0.1–1.5 cm, abaxially densely rufous-hairy or woolly, sometimes also white-pubescent, with raised midvein, adaxially dark green and wrinkled, margin strongly or slightly recurved. Inflorescence many-flowered; pedicels thin. Calyx lobes 5, ovate, 5–8 mm, persistent. Corolla milky white, 5–25 mm, densely rufous-woolly. Stamens 10; filaments pilose at base. Style persistent, 2–4 mm. Capsule ovoid, 3.5–4 mm. Fl. Jun–Jul, fr. Jul–Aug.

Coniferous forests, forest margins, marshes, wet meadows; 400–1400 m. Heilongjiang, Jilin, Nei Mongol [N Korea, Mongolia, Russia; NE Asia, C and N Europe, North America].

- 1a. Leaf blade linear-lanceolate or narrowly oblong, 2–8 × 0.4–1.5 cm ..... 1b. var. *dilatatum*
- 1b. Leaf blade linear, 1–3 × 0.1–0.3 cm.
  - 2a. Shrubs creeping; leaf blade abaxially densely rufous-hairy and white-pubescent ..... 1c. var. *decumbens*
  - 2b. Shrubs often erect; leaf blade abaxially densely rufous-woolly, not white-pubescent ..... 1a. var. *palustre*

#### 1a. *Ledum palustre* var. *palustre*

杜香(原变种) du xiang (yuan bian zhong)

*Ledum tomentosum* Stokes, nom. illeg. superfl.; *Rhododendron palustre* (Linnaeus) Kron & Judd (1990), not Turczaninow ex de Candolle (1839); *R. tomentosum* Harmaja.

Shrubs often erect. Leaf blade linear, 1–3 × 0.1–0.3 cm,

abaxially densely rufous-woolly, not white-pubescent, margin strongly recurved.

Often dominant in coniferous forests, marshes; 400–1400 m. Heilongjiang, Nei Mongol [Mongolia; NE Asia, C and N Europe, North America].

#### 1b. *Ledum palustre* var. *dilatatum* Wahlenberg, Pl. Lapp. 103. 1812.

宽叶杜香 kuan ye du xiang

Leaf blade linear-lanceolate or narrowly oblong, 2–8 × 0.4–1.5 cm, abaxially rufous-hairy and white-pubescent, margin slightly recurved.

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Coniferous forests, forest margins, marshes, wet meadows. Heilongjiang, Jilin [N Korea, Russia; NE Asia, N Europe].

**1c. *Ledum palustre* var. *decumbens* Aiton, Hort.**  
Kew. 2: 65. 1789.

小叶杜香 xiao ye du xiang

*Ledum decumbens* (Aiton) Loddiges ex Steudel; *Rhododendron subarcticum* Harmaja; *R. tomentosum* Harmaja subsp. *subarcticum* (Harmaja) G. D. Wallace.

Shrubs creeping. Leaf blade linear,  $1-1.5 \times 0.1-0.15$  cm, abaxially densely rufous-hairy and white-pubescent, margin slightly recurved.

Often dominant in coniferous forests, marshes. Heilongjiang, Nei Mongol [Mongolia; NE Asia, C and N Europe, North America].

