Smelowskia media (W.H. Drury & Rollins) Velichkin **Brassicaceae**

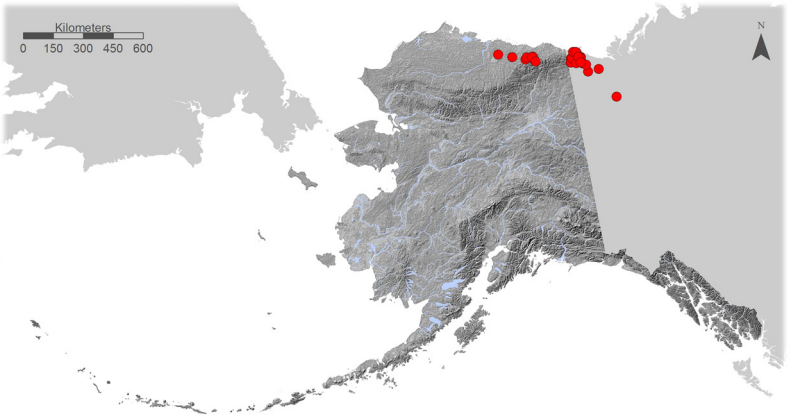
Synonyms: *Smelowskia calycina* var. *media*

Global Distribution: Endemic to northeastern Alaska, Yukon, and Northwest Territories.

Alaska Distribution: Arctic Tundra.

Ecoregions Occupied: Beaufort Coastal Plain, Brooks Foothills, Brooks Range.

Conservation Status: S2S3 G2G3; BLM Watch.



Description[186]

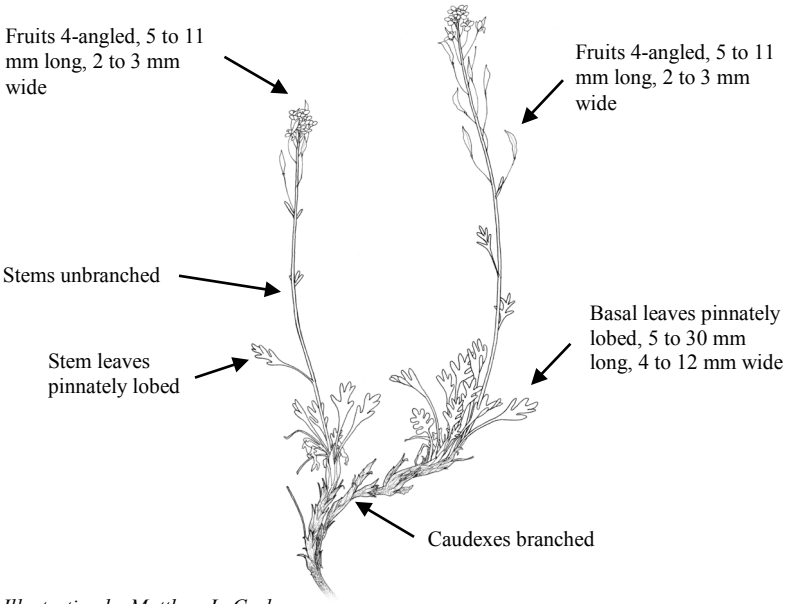


Illustration by Matthew L. Carlson

General: Perennial herb from branched caudex; stems several, unbranched, 5 to 14 cm long, covered with simple hairs 0.5 to 1.2 mm long and smaller, dendritic hairs.

Leaves: Petioles 7 to 35 mm long, ciliate; basal leaves oblanceolate to oblong, pinnately lobed or less commonly 3- to 5-lobed at the apex, 5 to 30 mm long, 4 to 12 mm wide; stem leaves short petiolate or sessile, reduced upwards.

Flowers: Flowers arranged in terminal racemes; sepals 2 to 3 mm long; petals white, obovate, 4 to 5 mm long, 2 to 3 mm wide.

Fruits: Racemes elongating in fruit; fruiting pedicels spreading, often forming greater than a 40° angle with the stem; fruits ellipsoid, 4-angled, 5 to 11 mm long, 2 to 3 mm wide with styles 0.1 to 0.5 mm long.

ALA 45532

Ecology

Elevation: Known from 180 to 1,240 m in Alaska; known from up to 1,500 m in western Canada.[186]

Landform: Alpine slopes, alpine ridges, river bluffs, rock outcrops, lake shores.

Soil Type: Scree, gravel, coarse-grained soil; sometimes associated with calcareous substrates, but also known from one collection on acidic substrate.

Moisture regime: Dry.

Slope: Gentle to steep.

Aspect: Often south to southwest, less commonly other aspects.

Vegetation type: Sparsely vegetated.

Associated species: *Braya humilis*, *Carex glacialis*, *Minuartia elegans*, *Papaver mcconnellii*, *Physaria arctica*, *Silene repens*, *Tephroseris yukonensis*.

Longevity: Perennial, likely long-lived as some specimens show extensive and well-developed caudexes.

Phenology: Flowering June through July;[186] fruiting late June through early August.

Population estimate: There are eight known occurrences in Alaska, none of which have been re-documented since 1982; one population was locally common in 1948.

Reproductive biology: Insect pollinated, likely by small bees or flies, or self-pollinated; high percentage of fruit set observed for an arctic species.[63]

Similar Species[186]

Smelowskia media was previously included in a broad concept of *Smelowskia calycina* as var. *media* along with *Smelowskia porsildii* as *Smelowskia calycina* var. *porsildii* or var. *integrifolia*. *Smelowskia borealis* also occurs in Northeast Alaska, but is readily distinguished when in flower by its lavender to purple petals. These species can be distinguished from each other by the morphological characteristics described in the table below.

Species	Basal Leaves	Stem Leaves	Fruits
Smelowskia media	Usually pinnately lobed	Usually pinnately lobed	4-angled
Smelowskia porsilidii	Entire or 3- to 5-lobed in apex	Usually entire, rarely 3- to 5-lobed in apex	Lacking angles or only slightly 4-angled
Smelowskia borealis	Palmately 3- to 7-lobed	Usually palmately 3- to 7-lobed, sometimes pinnately lobed	Flattened


1 cm
ALA 137402