

Scientific Name: *Sibbaldiopsis tridentata* (Ait.) Rydb. **Family:** *Rosaceae*

Common Names: three-toothed cinquefoil, shrubby five fingers

Plant Description

Low shrubby perennial with long creeping rootstocks and tufted leafy shoots, slightly woody at base; flowering stems 10 to 30 cm high; majority of leaves are near the base, firm textured trifoliate leaves, oblong lanceolate, 3 teeth near the apex of each leaflet (Moss 1983).

Fruit: Achenes borne in a head-like cluster (Johnson et al. 1995).

Seed: Brown to black, teardrop shaped to 1 mm long.

Habitat and Distribution

Prefers dry sandy areas and open pine forests (Budd and Best 1969).

Seral Stage: Early to mid-seral.

Soil: Gravelly, sterile, acidic (pH<6.8) soils (Ladybird Johnson Wildflower Center 2009).

Distribution: Southwestern District of Mackenzie to Hudson Bay, northern Quebec, Newfoundland south to Alberta, Saskatchewan, North Dakota, Iowa, Minnesota, Michigan, New York, Appalachia (Moss 1983).



S. tridentata growing in a rock crevice.

Phenology

Plants bloom from June to August. Seeds mature in a type of pod which turns from green to grayish-brown during the 3 to 4 week period after blooming (Ladybird Johnson Wildflower Center 2009).

Pollination

Possibly by insects (Hilty 2012).

Seed Dispersal

Unknown, but likely by passing animals, breaking papery receptacle.

Genetics

$2n=14, 28$ (Moss 1983).

Symbiosis

None known.

Seed Processing

Collection: Collect entire fruiting stalks; air-dry before cleaning.

Seed Weight: 0.39 g/1,000 seeds.



Sibbaldiopsis tridentata flower



Harvest Dates: Middle to late August.

Cleaning: No cleaning required (Schultz et al. 2002). If entire stalks harvested, shake seeds from receptacles after drying. Screens can be used to separate seeds from husks.

Storage Behaviour: No literature found.

Storage: Refrigerate in airtight containers (Ladybird Johnson Wildflower Center 2009).

Longevity: Seed maintains viability after one year of cool dry storage.



Propagation

Natural Regeneration: *S. tridentata* is clonal and spreads well on early seral sites (Marchand and Roach 1980).

Germination: 60% germination following 4 week cold stratification.

Optimal germination temperature 21°C to 26°C: taking on average 21 days to germinate (Marchand and Roach 1980).

Pre-treatment: Cold-moist stratify for 6 weeks (Ladybird Johnson Wildflower Center 2009).

Direct Seeding: Fresh seed sown outdoors after harvest will germinate the next spring. Seedlings do not flower for two years (Ladybird Johnson Wildflower Center 2011).

Vegetative Propagation: Vegetative propagation is *S. tridentata*'s main reproduction method (Marchand and Roach 1980). Plants can reproduce vegetatively by producing new plants from underground runners and are best divided in the fall (Hilty 2012).

Aboriginal/Food Uses

No literature found.

Reclamation Potential

S. tridentata was shown to be resistant to compaction and can grow in low nutrient conditions. In a case study done by Olfelt et al. (2009), *S. tridentata* successfully revegetated cliff edges disturbed by recreational activities.

Has been used in green roof landscaping study with 99% survival after one growing season (Wolf and Lundholm 2008).

Commercial Resources

Availability: Is available commercially in Alberta (ANPC 2010).

Cultivars: None.

Notes

Synonym *Potentilla tridentata* (Budd and Best 1969, Schultz et al. 2002).

Sibbaldiopsis tridentata is listed as 96% intact (less occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

Photo Credits

Photos 1 and 2: Walter Muma @ Ontariowildflowers.com

Photo 3: Wild Rose Consulting, Inc.

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