

**Scientific Name:** *Dalea villosa* var. *villosa*

**Common Name:** Hairy Prairie Clover

Alt Com Name: Silky Prairie Clover

Element ID: 11617

## Taxonomy

**Taxonomic class:** Dicotyledoneae

**Order:** Fabales

**Family Name:** Fabaceae

**Genus Name:** Dalea

**Family Common Name:** Pea Family

**Genus Common Name:** Prairie-clover

## Taxonomic Comments:

## Ranking and Protection Status

**Global Rank:** G5T5

**COSEWIC Status:** Threatened

**Provincial Rank:** S1

**Provincial Protection Status:** ENDANGERED

## Diagnostic Characteristics

### Identification Comments:

*Dalea villosa* (Nutt.) Spreng. var. *villosa*, or hairy prairie-clover, is a member of the Fabaceae or Pea Family. It is a perennial with a woody taproot and caudex. Stems are ascending or decumbent, 3-6 dm tall and densely villose. Leaves are very numerous and crowded, 3-5 cm long. Leaflets, numbering 9-17, are densely villose. Dense sessile spikes, 2-10 cm long, terminate the branches. The calyx is 4-5 mm long, 10-ribbed, and densely villose. Corollas are pale-rose-purple, rarely white. Flowers are pea-like. There are 5 stamens and 4 staminodes and one style. The pod is obovate, 3 mm long and villous. (COSEWIC 2000. G00COS09SKCA)



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### Lookalikes:

Currently no identified similar looking species

## Habitat Information and Comments

### Habitat Comments:

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-The plant is only found in sand hill communities where rapid soil drainage and sun exposure are present. May be found on partially stabilized sand, but some degree of drifting sand must usually be present in order for the plant to grow.

-Interestingly, existing hairy prairie-clover sites provide markers for the positions of old deltas of glacial lakes formed 10,000 to 17,000 years ago. During this time, all of the modern sites of hairy prairie-clover were connected by a series of glacial lakes and their spillways. *Dalea villosa* is found locally on active sand or sand hill blowouts although it also tolerates partially stabilized sandy sites. Habitat always includes some element of active sand. (COSEWIC 2000. G00COS09SKCA)

**Threat Comments:**

Leafy Spurge (*Euphorbia esula*) is an exotic weed that is currently threatening the Lauder Sand Hills population in Manitoba. Leafy Spurge spreads very quickly and once established, it excludes other forms of vegetation. It is generally thought that loss of habitat is the major factor causing the decline of Hairy Prairie Clover. Because the species requires at least partly active sand dunes to survive, it is threatened where dunes tend to stabilize. Grazing and fires play an important role in the dynamics of dune systems and affect populations of the plant. More than two-thirds of the mixed grasslands have been destroyed by cultivation, and further conversion of Hairy Prairie-clover habitat is a threat. In Spruce Woods Provincial Park, Hairy Prairie-Clover habitat is interlaced with hiking trails, and hiking is not restricted to the trails. This type of pressure, which includes the use of all-terrain vehicles in the Dundurn Sand Hills for example is also detrimental.

**Protection Comments:**

- The Hairy Prairie Clover's decline can be attributed to loss of habitat.
- Avoid conversion of the habitat as the entire ecosystem is endangered. These particular ecosystems are very fragile, and should remain undisturbed. The Hairy Prairie Clover relies on active sand for its habitat.
- Excessive rainfall, twice the normal amount of a desert area, increases the population of other plant species, which can lead to the stabilization of the sand dunes.
- The spread of leafy spurge is a major threat to the Mortlach area, and excessive spreading of this species should be avoided.

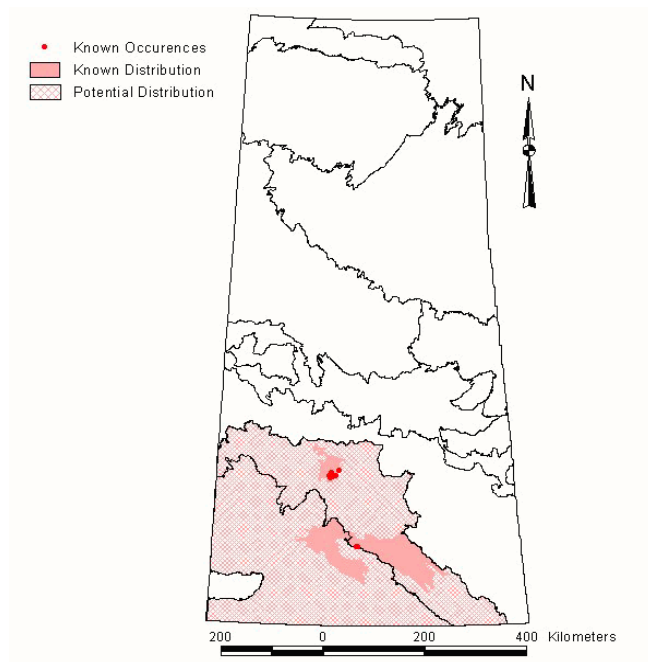
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### Saskatchewan Distribution



#### Rural Municipalities:

No Subnational Data

#### Range Extent Comments:

-Found approximately 1 km north of Dundurn, as well as 2 sites Southwest of Dundurn at approximately 15.5km and 19km.  
-Observed 9km east of Mortlach, and at another site 6.5km southeast of Mortlach. These sites have potentially been extirpated.

### Phenology

<u>Time of Year</u>	<u>Phenology</u>
July (1st half)	Flowering
July (2nd half)	Flowering
August (1st half)	Flowering
August (2nd half)	Flowering
September (1st half)	Fruiting
September (2nd half)	Fruiting

#### Phenology Comments:

The Hairy Prairie-clover is a perennial species which reproduces sexually by seeds. In Canada, the plants flower from late July to late August, setting seed in September.

### Reproduction and Ecology Comments

#### Reproduction Comments:

Currently no reproduction notes for this species.

#### Management Needs:

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- Continual monitoring of the Hairy Prairie Clover, including the phenology and inventories of known populations is of most importance. The Mortlach sand hills area should be regularly monitored to ensure they maintain their numbers and that no threat to their survival has developed.
- Regulations on the development of sand dune habitat would prevent possible conversion to cropland.
- Management practices should include preventative measures to combat sand dune stabilization by vegetation.
- Tourism, oil and gas exploration and other habitat altering disturbances should be monitored in order to protect the habitat.
- Although the dynamics of dune stabilization are poorly understood, a consensus is emerging that it is a combination of fire and grazing during appropriate seasons that keeps blowouts active (COSEWIC 2000).
- More studies are required to determine the best methods to ensure the Hairy Prairie Clover habitat will not be lost or altered.
- Trail use and all-terrain vehicles in the Dundurn area should be monitored.
- Formal protection, and a viable management plan are critical for the survival of the species.
- Contact the Saskatchewan Conservation Data Centre for specifics on a particular site.

**Management Comments:**

Activity restrictions require year round **low** intensity activity be limited to **foot traffic only** adjacent to populations, **medium** intensity activities\* should occur only at distances greater than **25 metres** from the population and **high** intensity activities\* at distances greater than **50 metres** from the population.

\*Examples of **medium** intensity activity include small vehicles <1 ton, ATVs, operating oil or gas wells, pipelines, trucks>1 ton (gravel, oil, grain), tractors (including farm tractors), pipeline construction (diameters <1 foot), operating compressor station or battery.

\*\*Examples of **high** intensity activity include road construction, roads, drilling rigs, mines and quarries, construction of compressor station or battery, forest harvest, large-diameter pipeline construction, seismic exploration, blasting, rock crushing, asphalt batching, gravel pit.

**References**

<b><u>Reference ID</u></b>	<b><u>Citation</u></b>
15678	Godwin, B. and Thorpe, J. 2004. PFRA Rare Plant Inventory Pilot Project. Grassland and Forest Ecology Section. Environment/Minerals Division. SRC Pub No. 11673-1E04.
19541	COSEWIC 2000 Assessment and Status Report on the Hairy Prairie-clover ( <i>Dalea villosa</i> var. <i>villosa</i> ) in Canada