

Scientific Name: *Anemone canadensis* L.

Family: *Ranunculaceae*

Common names: Canada anemone, meadow anemone

Plant Description

Tufted perennial herb from short, slender rhizome, 20 to 50 cm tall; stems erect, hairy; leaves basal, 1 to 5, simple, ascending, long-petioled, strongly veined, circular in outline, 4 to 10 cm long, 5 to 15 cm wide, deeply palmate in 3 to 5 divisions, the divisions mostly 3-cleft, the ultimate segments 10 to 30 (35) mm wide, toothed and incised on the upper 1/3 to 1/2, tips pointed, lightly fine-hairy; stalks 8 to 22 (37) cm long; single white erect flower per plant with 5 sepals, petals absent (Klinkenberg 2013, Moss 1983).

Fruit/Seed: Achenes, obovoid to ellipsoid, winged, strigose to glabrate; beak straight, 2 to 6 mm, strigose, not plumose; borne in a globose head (Moss 1983).

Habitat

Damp thickets, meadows, wet prairies, lakeshores and stream sides (eFloras.org n.d., Moss 1983).

Plants do best in areas that are full sun to part shade (Plants for a Future n.d.).

Seral Stage: Said to be late successional in Minnesota but can be an aggressive colonizer in optimal conditions, has been called a weed in domestic gardens (Jacobson 2006, Lady Bird Johnson Wildflower Center 2012).

Soils: Found in medium to wet, sandy loam to clay loam soils with a pH ranging from 6.8 to 7.2 (Prairie Originals n.d.).

Distribution: Throughout Alberta; southwest District of Mackenzie to Hudson Bay, Nova Scotia south to British Columbia, New Mexico, Missouri, Ohio, New Jersey (Moss 1983).

Phenology

First leaves are out mid-May. Flowers May through July (Plants for a Future n.d.). Seed ripen by the end of July.



***Anemone canadensis* seed collected at the end of July.**

Pollination

Insect pollinated by bees and flies (Plants for a Future n.d.). Flowers are self-incompatible producing little or no fruit when compared with pollination by an unrelated plant (Douglas and Cruden 1994).

Genetics

$2n=14$ (Moss 1983).

Seed Processing

Collection: Harvest by hand when seed is ripe, snip heads into breathable bags.



Seed Weight: 1.75 g/1,000 seeds (Wild Rose Consulting, Inc. 2009).

Harvest Dates: Late July (Wild Rose Consulting, Inc. 2009).

Cleaning: Crush to separate seed (Wild Rose Consulting, Inc. 2009).

Storage: Orthodox behaviour. Store dry in hermetically sealed containers at freezing temperatures (Royal Botanic Gardens Kew 2008).

Longevity: Unknown.

Propagation

Natural Regeneration: Spreads by seed and rhizome.

Germination: The seed usually germinates in 1 to 6 months at 15°C (Plants for a Future n.d.) but may take two years to germinate (Prairie Moon Nursery n.d.). 80% germination was achieved on a 1% agar media at temperatures of 20°C (8 hour day/18 night) with pre-treatments (Royal Botanic Gardens Kew 2008).

Pre-treatment: The seed is first mixed in equal parts of moist sand and vermiculite, and then cold stratified followed by a warm stratification and a second cold stratification (Prairie Moon Nursery n.d.). Pyle (2008) recommends cold stratification between 3 to 5°C for a period of 4 to 6 weeks followed by warm stratification between 18 to 24°C for a period of 2 to 4 weeks. Royal Botanic Gardens Kew (2008) used 4 weeks warm stratification at 20°C followed by a 12 week cold stratification at 5°C.

Direct Seed: Sow freshly ripened seed in a cold frame. Surface sow or only just cover the seed and keep the soil moist. Sow stored seed as soon as possible in late winter or early spring. When large enough to handle, pick the seedlings out into

individual pots and grow them in light shade in the greenhouse for at least their first year. When the plants are large enough, plant them out in the spring (Plants for a Future n.d.).

Vegetative Propagation: May be propagated by cuttings taken in the spring or by division in the early spring or fall. The rhizome on each new plant should be several inches long and be planted to a depth of half an inch (Ladybird Johnson Wildflower Center 2012). Individual plants do not transplant well according to the Fletcher Wildlife Garden (2013).

Aboriginal/Food Uses

The roots and leaves are astringent (Plants for a Future n.d.). A decoction of the root was used to treat worms and pain in the lumbar region (Plants for a Future n.d.). An infusion of the root was used as an eye wash to treat crossed eyes, twitches and eye poisoning (Plants for a Future n.d.). A wash of the pounded boiled root or leaves was applied externally to wounds, nosebleeds, sores, etc. (Plants for a Future n.d., Royer and Dickinson 1996). The root contains protoanemonin, which is said to be a potent antiseptic (Plants for a Future n.d.). A tea of the roots was used in the treatment of headaches and dizziness (Plants for a Future n.d.).

Anemones contain caustic irritants which can be harmful – do not consume and handle carefully (Royer and Dickinson 1996). Poisonous if consumed in large quantities (Klinkenberg 2013).

Wildlife/Forage Uses

Not used by domestic animal or wildlife due to its toxicity (Mackinnon et al. 2009).





Anemone canadensis in flower.

Reclamation Potential

Used in wetland and moist areas for reclamation (Jacobson 2006). This plant spreads by rhizomes which can be aggressive; this would be excellent for erosion control.

Commercial Resources

Availability: Seed and plants are commercially available in Alberta for landscaping (ANPC 2010).

Photo Credit

Photo 1: Courtesy of Walter Muma @ Ontariowildflowers.com.

Photo 2: Wild Rose Consulting, Inc.

References

ANPC (Alberta Native Plant Council), 2010. Native Plant Source List. http://www.anpc.ab.ca/assets/ANPC_2010_Native_Plant_Source_List.pdf [Last accessed June 14, 2013].

Douglas, K.L. and R.W. Cruden, 1994. The reproductive biology of *Anemone canadensis* (Ranunculaceae): Breeding system and facilitation of sexual selection. *American Journal of Botany* 81: 314-321.

eFloras.org, n.d. *Anemone canadensis* Linnaeus. Flora of North America.

http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=233500051 [Last accessed July 17, 2013].

Fletcher Wildlife Garden, 2013. Canada anemone - *Anemone canadensis*. Wildflowers for wildlife gardens. <http://www.ofnc.ca/fletcher/flora-fauna/wildflowers/database/Wildflowers.php> [Last accessed July 17, 2013].

Jacobson, R.L., 2006. Restoring & Managing Native Wetland & Upland Vegetation. Minnesota Board of Soil & Water Resources Minnesota, USA in cooperation with the Minnesota Department of Transportation. 70 pp.

Klinkenberg, B., 2013. *Anemone canadensis*; Canadian anemone Ranunculaceae. E-Flora BC: Electronic Atlas of the Plants of British Columbia. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Anemone%20canadensis> [Last accessed July 18, 2013].

Lady Bird Johnson Wildflower Center, 2012. Native Plant Database: *Anemone canadensis*. University of Texas at Austin, Austin, Texas. http://www.wildflower.org/plants/result.php?id_plant=ANCA8 [Last accessed May 15, 2013].

Mackinnon, A., L. Kershaw, J.T. Aranson, P. Owen, A. Karst and F Hamersley, 2009. Edible and Medicinal Plants of Canada. Lone Pine Publishing, Edmonton, Alberta. 417 pp.

Moss, E.H., 1983. Flora of Alberta. A manual of flowering plants, conifers, ferns, and fern allies found growing without cultivation in the province of Alberta, Canada. 2nd edition. University of Toronto Press, Toronto Ontario. p. 274.

Plants for a Future, n.d. *Anemone canadensis* - L. Plants For A Future, Dawlish, Devon, UK.



<http://www.pfaf.org/user/Plant.aspx?LatinName=Anemone+canadensis> [Last accessed June 14, 2013].

Prairie Moon Nursery, n.d. *Anemone canadensis* (Canada anemone).

<http://www.prairiemoon.com/seeds/wildflowers-forbs/anemone-canadensis-canada-anemone/?cat=271>
[Last accessed July 17, 2013].

Prairie Originals, n.d. Canada anemone – *Anemone Canadensis*.

http://www.silverplains.ca/flora/forbs/anemone_canada.htm [Last accessed July 17, 2013].

Pyle, A.R., 2008. Germination of difficult perennial seed. IN: International Plant Propagators' Society, combined proceedings 2007 57: 323-331.

Royal Botanic Gardens Kew, 2008. *Anemone canadensis* L. Seed Information Database.
<http://data.kew.org/sid/SidServlet?ID=1767&Num=XI5> [Last accessed June 14, 2013].

Royer, F. and R. Dickinson, 1996. Canada Anemone *Anemone canadensis* L. IN: Wild Flowers of Edmonton and Central Alberta. The University of Alberta Press, Edmonton, Alberta. p. 21.

Wild Rose Consulting, Inc., 2009. Unpublished data.

