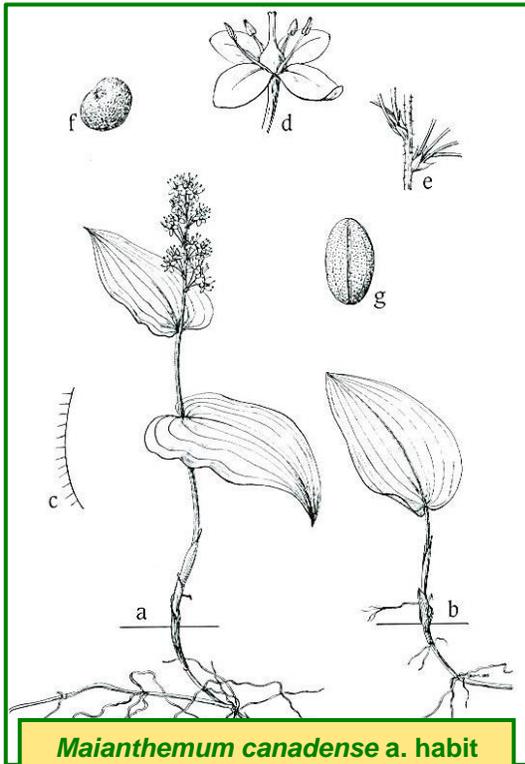


Scientific Name: *Maianthemum canadense* Desf.

Family: *Asparagaceae*

Common Names: wild lily-of-the-valley, false lily-of-the-valley, Canada mayflower



***Maianthemum canadense* a. habit including inflorescence, leaves, rhizomes and roots b. vegetative habit c. leaf margin d. flower e. branching inflorescence f. seed g. pollen**

Plant Description

Low perennial herb with creeping slender branching rhizomes; erect flowering stems, each with 1 to 3 sessile or short stalked leaves and an accompanying long-stalked basal leaf; stems 5 to 20 cm tall; leaf blades 2 to 8 cm long, ovate to oblong-lanceolate, cordate at base, more or less pubescent; flowers small, 4 to 6 mm wide, white, in a

short terminal raceme (MacKinnon et al. 2009, Moss 1983).

Fruit: A pale red berry, globose, 3 to 4 mm thick, 1 to 2 seeded (Moss 1983).

Seed: Ovoid, somewhat translucent, often tinged pink by fruit. Approximately 5 mm in diameter (MacKinnon et al. 2009).

Habitat and Distribution

Moss or leaf litter layer in moist aspen and spruce forests on ridge tops, steep to gentle slopes, rolling hills and low lands (Pavek 1993).

Seral Stage: Facultive seral species most often later stages of succession (Pavek 1993).

Soil: pH ranges between 4.5 and 5.5 and is found mainly on moderately drained soils but is occasionally found on well-drained and saturated soils (Pavek 1993).

Distribution: Common. Western District of Mackenzie, eastern British Columbia to Labrador and Newfoundland south to central Saskatchewan, North Dakota, Great Lakes, Appalachia (Moss 1983).

Phenology

Flowers from end of May to early July. The fruit matures within a month after the flower has finished. Can live 30 to 60 years (Pavek 1993).

Fruit is hard and white or greenish, becoming red and juicy after first frost.

Pollination

Is self-incompatible, insect pollinated by solitary bees, bee flies, and syrphids (Spencer et al. 1987).

Seed Dispersal

Showy fruit is most likely indicative of animal dispersal.



Genetics

2n=36, 54, 72 (Moss 1983).



Maianthemum canadense in flower

Seed Processing

Collection: Collect by hand in late summer - once fruit turns red. To prevent damage to fruit, cut stalk.

Seed Weight: 9.05 g/1000 seeds.

Fruit/Seed Volume: 10,880 seeds/L.

Fruit/Seed Weight: 19,070 seeds/kg.

Average Seed/Fruit: 1.3.

Harvest Dates: Mid to late September.

Cleaning: Macerate fruit in blender; decant water and pulp to isolate fruit. Allow to dry open to the air.

Storage Behavior: Likely Orthodox; seeds can be dried, without damage, to low moisture contents their longevity increases with reductions in both moisture content and temperature.

Storage: Viability drops after a full year of cool dry storage. *M. canadense* seeds maintained a 60% viability when dried to a 15% moisture content and stored at -20°C for 1 month (Royal Botanic Gardens Kew 2008).

Longevity: Unknown.

Propagation

Natural Regeneration: Reproduces vegetatively through rhizomes as well as by seed (Pavek 1993).

Germination: Up to 50% germination of fresh seed following 12 weeks cold stratification. Up to 10% of year old seed.

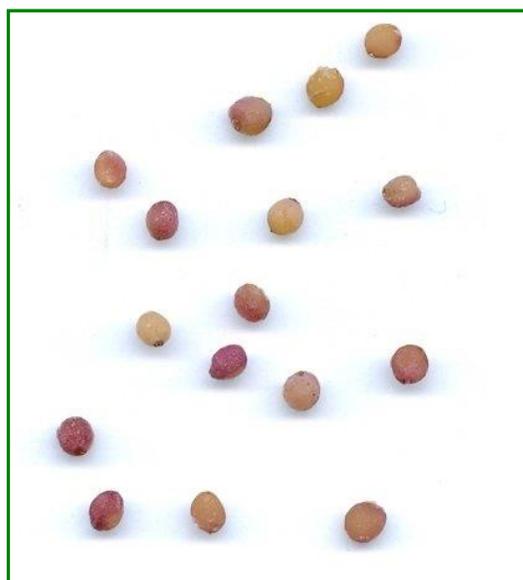
Pre-treatment: Seeds are placed in cold moist stratification for 71 to 112 days before planted (Baskin and Baskin 2002).
12 weeks cold stratification.

Direct Seeding: Collect fruits in the summer when berries are ripe and red. Remove the pulp from the seed then plant immediately outdoors (Lady Bird Johnson Wildflower Center 2009). May take 2 years to germinate (Diboll 2008).

Vegetative Propagation: Divide rhizomes in the fall after the leaves have turned yellow, place immediately in soil 1.5 cm underground and mulch (Lady Bird Johnson Wildflower Center 2009).

Aboriginal/Food Uses

Food: Berries are edible eaten fresh picked or mixed with other fruits to make sun dried fruit cakes (MacKinnon et al. 2009). Berries should not be eaten in large quantities as they can cause indigestion and may actually be poisonous (Royer and Dickinson 1996).



Maianthemum canadense seed

Medicinal: Used to treat sore throats and headaches. A leaf poultice was made for swellings in the limbs or burned to make inhaling smoke (MacKinnon et al. 2009).



Wildlife/Forage Usage

Wildlife: Important spring and summer food for white tail deer (Skinner and Telfer 1974). Berries are also eaten by frogs (MacKinnon et al. 2009).

Grazing Response: Can tolerate a moderate amount of grazing. *M. canadense* reproduce and grow from rhizomes and retain their connections underground. Though each genet grows independently once mature, it produces daughter plants and when the colony is damaged it can transfer nutrients (photoassimilate) to support the damaged plant (Rooney 1997).

Reclamation Potential

Rhizomatous nature indicates this species might be beneficial for erosion control.

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

Cultivars: No literature found.

Uses: Landscaping/gardening.

Notes

Maianthemum canadense is listed as 84% intact (less occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

Photo Credits

Photo 1: Wild Rose Consulting, Inc. 2010.

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