Scientific Name: *Mertensia paniculata* (Ait.) G. Don. **Family:** *Boraginaceae*

Common Names: bluebell, tall lungwort, tall bluebell

***Mertensia paniculata* panicle in bloom**

Plant Description

Perennial herb. Stems are mostly 20 to 80 cm tall, hirsute or villose, erect from woody caudex; basal leaves long petioled, cordate-ovate to elliptic-lanceolate, pubescent on both sides; cauline leave short-petioled, alternate and sessile, lanceolate, often acuminate and hirsute; inflorescence congested growing to paniculate; calyx strigose; corolla 0.8 to 1.4 cm long, with conspicuous scales on the throat (Moss 1983).

Seed: Each flower can produce up to 4 nutlets, 2.5 to 5 mm long (Borealforest.org n.d., Reeves 2006).

Habitat and Distribution

Found in moist, often shaded places, rich lush woodlands, willow thickets, moist depressions/meadows and stream banks (Tannas 1997).

Seral Stage: Shade tolerant species found in early to late seral stage. More common mid-seral, although it is found post-fire in early succession as well (Reeves 2006).

Soil: Moderately moist, relatively nutrient rich soils (Beckingham and Archibald 1996).

Distribution: Throughout Alberta. Alaska, Yukon, southwestern District of Mackenzie to southern Hudson Bay south to Oregon, Montana, Alberta, Saskatchewan, Manitoba, Minnesota, Iowa, Michigan (Moss 1983).

Phenology

Flowers in June and July (ALCLA Native Plants n.d., Plants for a Future n.d.).

Pollination

Insect pollinated, by bumblebees (Reeves 2006).

Seed Dispersal

Wind dispersed after capsules dry and break.

Genetics

2n=24, 72 (Moss 1983).

Symbiosis

Forms vesicular arbuscular mycorrhizal associations (Currah and Van Dyk 1986).

Seed Processing

Collection: Collect by hand, clipping heads to prevent shatter and seed loss. Once plants lose their leaves seed heads are very inconspicuous.

Harvest Dates: Late August/September.

Cleaning: Put the seed in a bag and crush it followed by winnowing or screening.

Storage Behaviour: Likely orthodox; dry seed to low relative humidity and store at freezing temperatures.

Storage: No literature found.

Longevity: No literature found.

Propagation

Natural Regeneration: Naturally regenerates from thick rhizomes.

Germination: Poor (<10%) (Treberg and Turkington 2006).

Pre-treatment: Soaking may improve germination, as does removal of seed coat. However, the improvement is not probably sufficient for the time required to tease the seed away from the coat without damaging the embryo (Treberg and Turkington 2006).

Vegetative Propagation: May be divided, with care, in early spring or autumn (Plants for a Future n.d.).

Aboriginal/Food Uses

Food: Dried leaves and flowers can be made into tea, fresh leaves can be added to soups or casseroles (Borealforest.org n.d., Gray 2011, Royer and Dickinson 2007), but is a bit too hairy for salads (Borealforest.org n.d.).

Medicinal: Used as part of a compound medicine for treatment of heart trouble (Marles et al. 2000).
The dried leaves were used in herbal tea mixtures, especially when treating the lungs (Borealforest.org n.d). effective at relieving diarrhea and hemorrhoids (Gray 2011).

Other: Possible use as an ornamental (Marles et al. 2000).

Wildlife/Forage Usage

Wildlife: Known as a grizzly bear, elk and snowshoe hare summer diet component (Reeves 2006).

Livestock: Poor to fair forage value although fairly nutritious until freeze. More commonly grazed by sheep than cattle (Tannas 1997).

Grazing Response: An increaser, spreading readily by rhizomes (Tannas 1997).

Reclamation Potential

Due to natural regeneration by rhizome post-fire, there is a likelihood transplants might be produced from rhizome cuttings. Although generally shade-tolerant, this species is found among others re-establishing post-fire, and therefore should not be unduly stressed in an early seral community. Has been used successfully in the reclamation of construction sites, recreation sites and some mining sites in Denali National Park (Reeves 2006).

Commercial Resources

Availability: Seeds and plants are commercially available in Alberta (ANPC 2010). However, to ensure material is properly adapted, local harvest is preferred.

Notes

Mertensia paniculata is listed as 85% intact (less occurrences than expected) in the Alberta oil sands region (Alberta Biodiversity Monitoring Institute 2014).

Photo Credits

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